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CHANGING STRUCTURE OF FARM MANAGEMENT EDUCATION IN HUNGARY

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Abstract

This paper outlines the new human resource requirements in agricultural sector as well as transitional changes and adjustments in agricultural higher education and farm management training in Hungary facing EU accession. During ongoing transition the ownership, production and organisation structure of Hungarian agriculture has been fundamentally changed. Most of large-scale (state owned or co-operative) farms has been privatised and decentralised and parallelly private commercial farming expanded. Accordingly, under an increasing market orientation the requirements against the knowledge, skills, tools and attitudes of farm managers are also altering and extending. In the new farm business environment there is less demand for agricultural engineers with theoretical and specialised knowledge. Considering the new professional profile graduate students should be fully aware of basic economic and marketing principles of farming and prepared for performing several practical tasks in the daily operation of a farm business. Besides strengthening the curriculum with new management oriented subjects it is necessary to introduce new training methods such as demonstration of case studies and pilot models, as well as training of problem oriented thinking, system approach, ability of working in teams and using different management tools as the advanced information and communication technology (ICT).

By presenting the example of Kaposvár Faculty of Pannon Agricultural University this paper demonstrates how a regional agricultural educational and extension center in south-west of Hungary has responded to the challenge of transition and found reasonable ways and solutions for improving training of potential farm managers.

CHANGES OF HUMAN RESOURCE REQUIREMENTS IN AGRICULTURE

The disappearance of the centrally planned or command economy and its replacement by a more liberal market economy under a radical political and social transition has resulted in fundamental changes in the ownership, production and organisation structure of the Hungarian agricultural sector. Most of large-scale farms has been privatised and decentralised and parallelly private commercial farming has expanded. The number, size and type of agribusiness units have changed so quickly that statistics could hardly follow the events. Accordingly under an increasing market orientation the political, social and economic environment and, as a result, the objectives, functions, knowledge and information requirements of managing agricultural activities have been fundamentally transformed.

The former large scale structure of agriculture was favourable to the employment of professionals specialised to various tasks on the side of production, such as plant control, irrigation, machinery services, etc. Under the managerial circumstances and incentive system of socialism there was not particular attention paid to economic and marketing knowledge of employees or co-operative members that was reflected in the content and structure of agricultural education and training (e.g. emphasis on theoretical aspects, missing of practical oriented training methods, etc.).

The major causes of changing human resource requirements can be summarised as follows:

Privatisation of the land and other assets of production co-operatives according to the new legislation. The appearance of private property itself caused radical changes in the thinking and behaviour of individuals in co-operative to establishes new organisation forms and to create new incentive systems. This opened the way for business oriented managerial work and transferring labour from „employee” position to a property owner „entrepreneur”.

Privatisation of state farms and disintegration of large scale organisations. During this process several small and multinational foreign investors gained good positions in purchasing state property due to their financial strength compared to the potential Hungarian investors. The appearance of foreign capital and the transfer of advanced

business company culture has often changed the disciplines, standards and daily process of management in many farm or food businesses.

- The rapid extension of liberalised market under a less developed market regulation resulted in sharp market competition between farm businesses and a very changeable, unforeseeable environment. Participants of the logistics or food chain often tend to achieve reasonable agreements with each other to be able to maintain their market positions. This resulted in a serious stress on the ability of market players to acquire information, to respond and manage unpredictable changes.
- The need for using information and communication technology (ICT) for improving farm business means another important requirement. Tools of ICT are new „weapons” in the hand of farm management. Considering recent tendencies in agricultural markets (globalization, regional markets) farm decision making should be based on relevant, flexible and timely information and competitiveness can not be obtained and maintained without having highly developed farm management information systems.

The strength and convertibility of the national currency as well as bargaining power of domestic producers are also depending on the quality of management. Managers should be prepared in practices of advanced marketing, finance, contracting, human resource and strategic management and possess a knowledge fits to international standards.

Because of the obsolete or too specialised knowledge of agricultural professionals trained in the past as well as the shortage of relevant information in the current farm business environment many farmers, producers, farm managers are still unaware of some of the real commercial opportunities open to them and of how to determine the most profitable use of their resources.

A market economy can survive only with well-prepared up-to-date managers and advanced management training. It can be justified by international observations that in a country there is close correlation between the quality and skill level of the managers' stratum and the performance, development rate as well as efficiency of its economy.

Due to the wide-ranging transitional impacts with increasing market orientation of the economy and recent EU accession process in Hungary the requirements against the knowledge, skills and attitude of managers, producers, workers operating in any branch

of agriculture and food sector, or the present and potential demand of labour market have been fundamentally changing. In order to respond to these radical changes in the demand for new type of agricultural professionals significant structural change should be carried out in Hungarian agricultural education system.

FARM MANAGEMENT EDUCATION IN PROGRESS

Management work, as a career, is of growing importance in Hungary considering the human resources requirements under recent transition which extremely highlights the role of education and training. One of the basic conditions of the development of management education is the increase and improvement of training economics and related subjects. It necessitates restructuring obsolete curriculums and introducing market and practical oriented teaching methods based on qualified teaching staff as well as improving other conditions. The knowledge and practical skills of graduate students starting their career should satisfy the requirements of the actual economic and business practice. It means one of the most important quality criterion of business management training. The establishment and operation of sustainable new farm businesses in the market oriented environment necessitate new type of professionals with advanced economic, marketing and management knowledge and working ability. Restructuring and improvement of farm management training has some special additional features.

The reform process of agricultural higher education in Hungary has been started parallelly with the transition. Government made arrangements for starting an "integration" process of the unreasonably fragmented institutional system but until the last year concrete actions were postponed. Considering several contradictory interests and conflicts it was presumable that progress needs relatively long time. In 1993 Parliament approved the Act on Higher Education which was revised, than an improved act was issued in 1996. At the beginning all agricultural education institute (universities, colleges, secondary and skilled worker training schools) belonged to the authority of Ministry of Agriculture. From 1995 the entire higher education has been operating under the authority of Ministry of Culture and Public Education. In 1994 Ministry of Agriculture issued a departmental order for the development of medium level education in farm business management and determined the qualification criterions for issuing diplomas of „Qualified

farmer" and „Qualified farmer housewife". In 1996 the Government issued an order for development of economic and management training curricula and introduced new degrees in farm and agribusiness management education which opened the way of an institutional development process.

Some observations will be summarised below of the progress of farm management education based on an informal survey in agricultural education in Hungary. There are only two agricultural university faculties in Hungary where classical "farm business manager" diploma is issued and one organisation where agricultural economics and agricultural management training activity was started more than a decade. At the beginning of the transition almost all main agricultural faculties responded to the changing needs with introducing a 5 year level "agricultural economist", "agricultural manager" diploma training. In the first half of this decade number of students studied in some kind of farm management course increased very rapidly. Between 1990 and 1996 the number of this kind of students increased for six times, while the number of students attending vocational training and courses in farm management increased for almost thirty times. As for the evaluation of recent curricula of farm management developments have been rather moderate. During the first half of transition period there were limited changes in curricula. As an effect of approval of the higher education act a slow improving process had been started. One of the major limitation is that faculty members with proper qualifications, capacity and capability for training advanced farm management are very limited. Stabilisation and improvement of faculty staff of farm business management training can not be quarantined because salaries and tutorial fees of lecturers, professors do not compete with possibilities in business companies, banking, insurance or other sector.

As a result of the modest reform several new subjects appeared (Farm Economics, Farm Business Management, Farm Management Case Studies, Environment Management, Agricultural Marketing etc.) but there is a lack of advanced, standardised good quality assortments of lecture notes. New courses like "Enterprise Management", "Rural Business Organisation" "Junior agricultural extensionist", „Agrotourism Management" etc. have been also developed but in many cases without written teaching material their quality, structure and content can not be judged. It is a positive impact that in some new curriculums there is a special emphasis on practical oriented training in order to develop

management skills, abilities and attitudes (e.g. working in interdisciplinary teams, problem-oriented thinking etc.) based on realistic farm management models and examples.

Considering recent farm management curricula other disciplines (e.g. agricultural engineering, machinery etc.) still are dominating compared to management and economics. Because the lack of finance, well-equipped college farms, and necessary human resources practical-oriented problem solving training is very limited in several cases.

Almost all agricultural higher education institutes elaborated some concepts and strategies for their institutional development urged by the Government in the last 4-5 years but real actions has been speeded up only by a recent World Bank project on integration of higher education . According to a brand new Parliament decree agricultural higher education will be radically reorganised in the near future based on IDPs . Hopefully, it will further positive effects on the development of farm management education

EXAMPLE OF KAPOSVAR UNIVERSITY FACULTY

Kaposvar Faculty of Pannon Agricultural University (KUN), a regional education and extension centre located in the city of Kaposvar, in south-west of Hungary, has more than thirty years experience in animal science and husbandry education. The institute has been developed from a college having strengths and good tradition in practical oriented training of animal breeding which has been acknowledged all over in Hungary and abroad as well.

Present options and levels of diploma

At the beginning KUN provided a 3 year level diploma in animal husbandry farming (BSc) but in order to remain competitive they decided to further develop this system toward issuing other diplomas. Due to its open-minded leadership curricula was regularly reviewed and updated. Some basic principle of the education are as follows:

- The education could be able to satisfy certain labour market requirements if it had been carefully prepared, structured and designed to follow, monitor and predict future tendencies and changes in society and economy.
- An agricultural higher education institution could be successful only if it is able to offer options, or choices of diplomas for students. A certain part of the students at the beginning of their study can not decide which direction is to choose.

On the other hand the university should provide stable, convertible knowledge for students, which can be used and activated even in postgraduate studies.

Presently a student in KUN can choose from the following accredited training lines:

- 3 year level study - farm engineer in livestock management (BSc)
- 5 year level study - diploma in agricultural engineering (MSc)
- 5 year level study - diploma in agricultural engineering teacher (Msc)
- 5 year level study - diploma in agricultural management (MSc)
- 4 year level study - farm engineer in livestock management (BSc, corresponding training)
- 3 year level study - diploma in agricultural engineering (MSc, corresponding training) a supplement to farm engineer certificate
- 2 year level study - postgraduate diploma in special livestock related topics

In an advanced diploma program based on a good quality curricula graduate students in KUN should be able to acquire proper level of biological, technical and economic knowledge which can satisfy the needs of accurate production and processing technologies. It is an important requirement that young professionals in a short periode of time after finishing their studies in KUN have to be able to utilise and exploit their knowledge in the practice. Structure and elements practical training

Because of the history and experience the main mission of KUN is to educate specialised animal production experts for working in large scale farms. Work of its former students also contributed to the success of the Hungarian agriculture, animal production when the output was multiplied and whole animal production was modernised. Its previous (and partly the present) practical training structure was established in order to satisfy the requirements of large scale agriculture. Students have

to get acquainted with animal production units during continuous practice periods of some days or weeks. They have to perform the most common physical work operations at each species in exercise periods. They study the general technology of different farms, work organisation and the everyday life of a given enterprise. They are informed about the work of the managers, their methods and techniques of planning and decision making. Students have to be able to evaluate the performance of individual workers and/or that of a production process.

Exercise places are located in the study farm of KUN, as well as in different large scale farms in the south regions of Transdanubia as well as in private farms either in Hungary or in foreign countries.

The figure below shows the practical training periods in the agricultural engineer (MSc) courses and than the content of each individual period is explained.

Time schedule of exercise periods in farm practice (MSc course)

Level	Month	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1 st		1		1			1							
2 nd														
3 rd		Tractor driving					Tractor driving							
4 th		2												
5 th								1			5			

1. Exercises in physical work:

To supply information for students about the most common physical work operations (methods, techniques, tools and skills) on an animal farm before the student begins his or her first semester and later in the period of teaching basic subject matters. They have to be skilled in all kinds of physical work. It can improve their self-confidence and later it helps them to more sure of themselves as a manager. During this practice they can get acquainted with a community of workers and, on the other hand it is also a test for them if they can stand the mental and physical stresses and if they are suitable at all for this type of career.

Practice duration is four weeks: two weeks in one block on a large scale farm, third and fourth week during the first and second semester on the study farm of KUN.

2. Production technology exercise:

To take part in active way in the production process of a small or large scale farm. Students have to study the relevant production technologies (crop and animal production, storage work organisation, selling techniques). They have to record data about the production. If they are on a family farm (mostly not in their own family) they have to work together with family members.

Students are placed on domestic or foreign private farms. If students are sent to study in a foreign country farm it is very important for them to learn about the farming „sense“ and about developed technologies. The basic objective is to let them have the possibility to learn by which „sense“ they will later be able to increase their profit. They have to report also on state interventions toward agricultural sector, the logistic chain, in the modern market economy.

Exercise duration is six weeks after absolving fourth semester in June-July (BSc course) or before eighth semester in September-October (MSc course)

3. Farm management exercises I.

It is organised for BSc students, before the 6th semester in January-February. By that time they acquire most special knowledge in animal production. The objective is to use the obtained skills independently in order to prepare the students for being able to manage a unit in a profitable way. Basic task during the practice is to prepare the actual year business plan of the given unit.

4. Farm management exercise II.

MSc students spent their last, 10th semester with this practice. By that time they are in possession of all professional information. The basic goal is to let them learn about the everyday practice of middle and top level management. Certain tasks are given to them (by field advisor) to carry out on their own, independently with supervision of the consulting teacher or of the field advisor. They have to study crop and animal production in their complexity, as well as they can get practice in resource management as well as in planning and top or lower level decision making.

5. Cross-country study tour

In order to widen general knowledge of graduate students in agriculture prior to final state examinations (June, after 6th semester at BSc .and 10th semester at MSc course)

During the trip students can have a picture on the differences between production methods of certain regions. They can study and get acquainted with new technologies, varieties, breeds etc.

Major changes and adjustments

An obvious consequence of the above macro and microeconomics tendencies that the demand for professionals with diversified functions and wide theoretical background as well as for economic "sense" or business orientation and attitude, for skills in information and communication technology and for knowledge of at least one foreign language, is rapidly increasing.

In the changing economic environment it is important to educate much more economic subjects for students along with the basic and agricultural subjects. In order to be able to manage their enterprises they have to learn and practice special knowledges.

The management of KUN had recognised the alterations in the demand in time and elaborated and accredited the curriculum of the agricultural economist course. Within this students learn basic and agricultural subjects during the four semesters. The next six semesters are for training of economic, marketing, financial, law and general management subjects. In the table bellow the rate of economic and management subject could be compared between the different (traditional and new) courses. The figures shows that the rate of management subjects changed from 20.3% and 28% to 56.1%

Graduates have to be supported not only by their academic knowledge but by practical experiences as well in being able to quickly adapt themselves to their working environment. To achieve this aim KUN has to provide suitable training sites.

It is highly recommended for all agricultural higher education institute to provide the possibility of 'clinical' practising through a well-equipped, applicable study farm. These farms have to be non-profit organisations but have to form a separated accounting unit (university or faculty control and financing). This is not valid, of course, with private educational institutions. At this faculty these requirements are fulfilled.

Beside having a study farm it is still very important to get in touch with a number of other farms as possible practise partners and then maintain a close connection with them. To achieve continuity KUN constantly informs them about the changes in the training aims. As a feedback it can easily gather information about the 'daily' problems of agricultural

production units. Partnership contracts are continuously reviewed. Partner farms can take part in the development of different subject matters.

12TH CONGRESS



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List and training hours of economic and management subjects by the type of diplomas

	Subject matter	Farm engineer	Agr. engineer	Agr. manager
		BSc	MSc	MSc
1	Economics	93	93	112
2	Mathematics	70	70	140
3	Computing	56	56	
4	Applied Mathematics	64	64	
5	Econ. Mathematics		120	
6	Operation Research			56
7	Ag Statistics		64	140
8	Ag Economics		32	56
9	Farm Management	168	217	378
10	Accounting	36	98	224
11	Finance			28
12	Work Organisation		70	56
13	Management		75	70
14	Marketing	36	45	70
15	Corp. Law		28	28
16	Informatics			168
17	Environm. Management			28
18	Value Analysis			42
19	Enterpr. Management			84
20	Planning Case Studies			28
21	Regional Politics			28
22	EU Ag Politics			28
23	Alternative subjects		111	280
24	Optional subjects	30	50	80
25	Listed total	553	1193	2124
26	Total training hours	2723	4255	3788
27	Ratio	20.3	28.0	56.1
28	Farm practice	680	1000	1000
29	Foreign language	180	336	336

think globally
farm locally

Practice partners' performance should be over the average. If it is necessary the department staff consult with the partner livestock farm manager how to improve the performance. Basic requirement is that the partner farm has to be able to show up well organised managerial and accounting system. Special exercise objectives are often declared and, if one proves to be useful KUN integrates it into the requirements of the everyday practice.

A fundamental goal of the faculty is to maintain at least 20% (or more, if it is possible) of the acquired practical skills within the total training period and that it should be organised in producing, servicing, financial or extension organisations of different size.

Practices have to take several weeks and they have to cover different intervals of the production period. In such a system the students have got the possibility to experience the seasonality of the agricultural production and the differences in the problem solving processes.

Pregraduate students fulfil their practice on higher management levels working independently with the help of the corresponding manager. When MSc course was introduced two new subject matters appeared at Farm Management Department, namely 'Work organisation' and 'Management'. Both deliver crucial knowledge for a later farm manager. Work organisation subject is aimed to provide theoretical background for planning agricultural operations in a reasonable way. It has close connection with the production technology practice block, where the student can apply in practical life he or she learnt on the lecture; work conditions, workplace studies, elements of production process, time analysis, workday studies, determining time losses, ergonomics, job descriptions, work scheduling etc.

Second subject matter is 'Management'. Beside managerial knowledge it is also important that relevant managerial skill should be included into the curriculum. During trainings we improve the students' skills and later in practice period they can apply them. Basic aim is that the students have to become not only good production leaders but also good managers.

Farm management practice is where MSc students can exploit their theoretical knowledge. Experienced - and analysed -situations will have an impact on their future professional life. Problems they have to deal with during the practice period are:

corporate structure, comparing organisations, tasks on different managerial levels, defining authorities and rights, analysis of problem solving processes, studying and analysing decision making procedures, defining different manager types, features and qualities, social aspects of management etc.

Due to the ever stronger globalization, accepting and practising activities matching with international standards mean 'daily' reality now. Young graduates have to communicate experts from Europe or from other continents. They have to obtain experiences in the accepted business languages. KUN organises for students a number of foreign study trips and mainly foreign practices. Due to the geographical location of the faculty it means mostly West-European countries. Foreign language teaching represents remarkable part of the training curriculum, not only as percent ratio but also in absolute numbers. Practices or conferences in foreign countries offer excellent possibility for the students to improve their language proficiencies.

During the last couple of years KUN had to restructure the whole farm exercise system. „Eastern” connections were cut down, the aim of practices had changed. Instead of organising 'bonus trips' for the students to 'hang around', the new approach assumes real 'working' practice.

In the past KUN had connections with universities in the Newly Independent Countries in former Soviet Union, Czechoslovakia, Bulgaria. From the early 90s our connections widened, including Austria, UK (Bishop Burton), the Netherlands (Delft), Germany (Hannover) and Switzerland. Instead of the former 1-2 weeks long 'hanging around tours' now the students have to work 8 weeks long on West-European private farms getting aquatinted with the technology, skilled tricks and the everyday life of a farming family. These practices are incorporated into the basic training period. On return their experiences are then evaluated just like it is the case with any other subject matter.

Technical development is now a part of everyday life. All members of a farm family have to take part in any kind of farm work. That is why it is a standard requirements from the practising student to obtain - on their own - at least a tractor driving license. KUN endeavours to use every reasonable possibility to motivate students to a 'like-to-learn' attitude concerning the management issue, so we had to change our teaching methods as well.

Managers of the contracted partner farms can now hire the pregraduate students as 'holiday substitutes' In the second part of their farm management practice they practically substitute somebody being on holiday. Usually this is their first real impression about the 'sharp reality'. For many years now KUN organises a practical competition for students, titled as "Farmer of Kaposvár" demonstrating even by this competition that this faculty took up the gamble in educating advanced agricultural professionals.

We conclude that the presence of market economy did not changed the basic content of an agricultural engineer's work but the possibility for real manager work was provided only by this recent transition. The nature of the work of a former socialist leader and of a present manager is totally different.

It is obvious now with the young generation that their business and management approach as well as the general and special skills needed by this type of career have to be developed even from early stages of education and then continuously be improved until the graduation.

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