



A review on vocational training in Hungarian husbandry with regard to physical workforce supply for the bovine plants

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SUMMARY

Changes of the past 15 years have affected every element of farming. The changed property structure and plant structure, solvency problems, the widened agricultural gap, radical changes in regulation system are the typical features of the period. The ratio of animal keeping within the national agricultural volume has significantly decreased. This process has influenced the total number of livestock, the number of farmers and the number of livestock per farm. It directly resulted in the decrease of the number of employees in the sector. Besides quantitative drops, the composition of employees has changed which, among others, is due to social and economic changes negatively affecting the role and importance and image of agriculture.

Vocational training adjusting to market expectations has changed in a way where within the number of agricultural trainings has the number of training with GCE output dropped. Moreover the structure of present training is not considered homogeneous, there are regions where there are no available trainings for animal keeping.

The bigger part of animal keeping jobs does not require legal adequacy, the selection is based on family ties or acquaintance: the employees are basically unskilled. The present level of animal keeping is sustainable with the present and restricted human resources, but future changes prognosticated will require, should require, a new type of skilled workers, whose training would be realized based on dually considered training goals within the changing vocational training system.

Changes in vocational training underway can contribute to the sustainability of the production of animal produce in the case of a successful identification of the employers' demands, needs and the trends of changes and goals in educational policy. These can properly define the new framework meeting social and economic needs.

Enlargements of adult training, better cooperation among vocational training providers operating both in institutional and business sectors and agricultural organizations can solve the problem.

Keywords: workforce, animal husbandry, milk production, vocational education, employment.

INTRODUCTION

The workforce of the large-scale cattle farms are facing major professional and generation changes these days. Husbandry related labour activities and jobs are becoming more and more complex with the advance of automation and technology/know-how along with constantly increasing diverse specifications and regulations of production and products whereas beyond certain level-jobs and activities requiring limited professional knowledge are unsustainable.

Vocational training with diverse levels, forms and purposes satisfying changing organisational needs posing as valuable sources of workforce supply, besides professional needs, should consider social issues and aspects as well as for the labour force in husbandry, their social status, expectations and reservations about vocational training, the mental-, social- and learning features of those taking part in vocational training. Their powerful habits and behaviour rooting from prevailing labour culture should be taken into account too.

OVERVIEW

Vocational training satisfies labour market expectations and employment basically in two ways: one within the present educational system, and in non-system forms. Basically in adult education it is in diverse forms. Vocational training is supervised by several ministries. This duality is felt in financing besides its instruction and development.

Legal regulation and supervision have resulted in a fragmented institutional system with paralleled existing trades/orientations and oversupply and shortage in trades at the same time (*NIVE 2005a*).

The structure of vocational qualifications is based on the National Qualification Register (see NQR). 1/2006. (II. 17.) The Ministry of Education's decree on The National Qualification Register was published in February 2006 (Ministry of Education decree 2006), enabling significant changes both in the number of professional qualifications and in the vocational training system. The reform to restructure the NQR was aimed at meeting needs due for over more than one and a half decades such as meeting the needs of the labour market and transfer in training. As a result of the reform the new structure has influenced the content, the input and output as well as the process control of the vocational training, its syllabus and the system of exam requirements (*NIVE 2005b*).

Demographic trends determining the training demands are one of the influential factors considering the status of vocational training. In Hungary, a natural decrease in population has been witnessed since 1981 (*HCSO 2009a*).

The qualification of the population has improved as a whole, thus coming closer to EU average; however the number of students in vocational schools compared to that of those with GCE or diploma has dropped by half over the past 15 years. The number of students in vocational schools will further diminish in the coming years while one quarter of those leaving the educational system will remain unskilled (*Farkas 2006*).

The students applying for vocational schools typically achieve weaker results in primary education, have weaker learning abilities and come from worse environments both socially and financially. Their mental and family backgrounds are worse than those applying for other types of educational institutions. These factors significantly render practical and theoretical training more difficult as well as the pedagogical tasks; the dropout rate is the highest in the vocational schools (NIVE 2005a). The majority of students with disadvantageous background in the educational system belongs to the network of vocational schools. The situation resulting from the above mentioned and being unskilled can become the source of disadvantageous social background, and its reproduction (Vámosi 2005).

Non-system vocational training (adult training) basically differs from the vocational training within the educational system in the way that it's a place of training rather than that of education. It mainly serves to function as a "puffer" in quickly reacting to the changes of the labour market and establish the constant improvement of employees' competences (NIVE 2005a).

There are approximately 3 million employees in the labour market whose jobs (job responsibilities) do not require tertiary qualifications, thus their employments need NQR related qualifications or should require them. However, there are approximately nine-hundred thousand employees of "active" age without any professional qualification. Nowadays it is inevitable for every employee to obtain more and more new qualifications through their lives, this is supported by the philosophy of LLL (Lifelong Learning) which can be realised within the adult education (Deregán 2005).

Number one, and the most important resource in the agriculture, is man-made labour activities (Magda 1998). Since husbandry (animal keeping and breeding) takes place under special conditions Pfau and Széles (2001), though automation in animal keeping is significant, the process can only partially be automated, hence human labour is indispensable, and fundamental (Berde 2003).

Ever-changing economic and social system of animal keeping operates in partially predictable biological and ecological-climatic circumstances, where constant adjustment to circumstances and changes in working conditions is a must. It needs professional qualifications, problem-solving skills, independence, creativity and the ability to make quick decisions (Rimler 2000). In case of milk cattle keeping the ratio of costs related to labour force depending on the applied technology is 12–16%, so it is significant as an independent cost factor, but if we consider the impact of work on the other production resources it has obviously greater economic value (Pfau and Széles 2001).

Present manning in dairy farms in Hungary is not adequate which has also social and economic reasons. Man always appears as top priority resource in technical literature.

The human factor has adequately been treated with considerable attention, technology and different standpoints of the given social and economic requirements. Molnár (1964) states that already back in 1964, one of the greatest problems for the managements of dairy farms was the shortage of qualified skilled labour „there is no young man who would undertake the job”. This problem is still a major one in our times. One can state that in the bigger part of the dairy farms the labour force is not properly trained ("under-trained") and is getting older and older at the same time (Kovács 2004).

The number of people employed in agriculture, and its ratio in relation to the other sectors of the national economy is decreasing year by year, though the number of employed is still significant. In 2003 there were 44,016 permanently employed and 3,860 seasonally employed workers in dairy farms keeping more than 50,000 cows in Hungary (HCSO 2005). The greater part of cows are kept – that is the 2/3 of the livestock – in 863 economic organizations (HCSO 2009b). Data by Állattenyésztési Teljesítményvizsgáló Kft. (Animal Husbandry Benchmarking Ltd. – www.atkft.hu) shows and proves the reason for analysing the dairy farms with large scale production. In Hungary 85% of milk is produced by 5% of the producers with 72% of the livestock.

METHOD AND PRELIMINARIES

The purpose of the analysis is to survey what training opportunities for husbandry within the Hungarian vocational training are like among the efforts to develop professional knowledge and whether there is appropriate supply of workforce for cattle farms with large scale production. The study analyzes the subject-matter, structural relations of respective vocational schools, adult training opportunities and their important practical factors for the employers and employees.

Vocational training data is obtained from the databases of the National Vocational and Adult Training Institute and the Ministry of Agriculture and Rural Development. The analysis contains the results of human resource and labour science survey of cattle farms with large-scale production carried out prior to the analysis.

Qualifications chosen are based on the analysis of NQR professional and exam requirements, central programs and work processes in cattle farms.

The study will analyze the following qualifications within vocational, special vocational training system and non-system training: agricultural machinist and repairer (31 521 01), cattle breeder (31 621 01), stockbreeder (31 621 03), stockbreeder and animal health technician (54 621 03), inseminator (31 641 01), agricultural machine operator (31 521 19), agricultural machine operator and repairer (31 521 209), dairy product maker (33 541 07) (*Ministry of Social Affairs and Labour decree 2009*).

The starting point of the study was that the responsibilities and tasks of work at cattle farms have become more complex requiring the knowledge of several qualifications due to the changes having taken place in the work process and the circumstances since employees' tasks and work responsibilities and requirements change fast and significantly.

RESULTS AND CONCLUSIONS

Agreement of the ratio of employment and training structure according to the appropriate operation of labour market is said to be important. The ratio of employees working in agriculture in Hungary is 4.3% (*RIAE and HCSO 2008*).

Table 1. shows the breakdown of qualification groups by qualifications listed in NQR taught at vocational schools.

Table 1. The ratio of qualifications listed in agricultural qualification group taught at vocational schools (within the training system) in relation to the number of students by regions (capita)

	No 20. qualificaton group – agriculture	Total	The ratio of no 20. qualification group
Central Hungarian region	1055	41551	2.54%
Central Transdanubian region	708	17612	4.02%
Western Transdanubian region	757	16205	4.67%
Southern Transdanubian region	817	15404	5.30%
Northern Hungarian region	796	18796	4.23%
Northern Great Plain region	1310	25363	5.17%
Southern Great Plain region	1658	25478	6.51%
Hungary total	7101	160409	4.43%

Source: Ministry of Education and Culture (2009)

The ratio of students involved in non-system training for agriculture, forestry and husbandry was 2.27% in 1996, 2.64% in 2000 and 4.9% in 2002, the majority of students took part in NQR training.

The analysis of vocational trainings for husbandry was prompted by the study of the use of manpower in large-scale cattle farms. The results pointed out the importance of special knowledge necessitated by the technical, know-how, economic and quality changes.

Blue collar workers of five large-scale cattle farms were examined during previous studies and their results urge the solution of the problem of blue collar workers' supply regarding the level of knowledge and age groups.

The aspects of the study of the given qualifications were:

- what level of professional knowledge is provided within the subject-matter of the qualification and how it is utilized in husbandry of today and in the future;
- where and what forms of training are available?

The analysis of trainings cannot be restricted to those who join animal keeping, so it is important to assess the willingness to take part in training and the awareness of training opportunities among the employees of the cattle farms examined.

During the survey (with the help of questionnaires) more than 50% of employees would be willing to take part in trainings if not at their own expense, 10% would be ready to enrol even at their own expenses. Nearly half of the surveyed feels that they should take part in professional training permanently, however only 2% could name the training opportunities. 30% of the interviewed think that the resource of their professional knowledge necessary for their work is the vocational educational system, while 75% gained their knowledge at their workplace by observing and self-studying, 85% obtained their knowledge with the help of the colleagues.

Besides this important transfer of experience ingrained, often outdated maybe harmful methods are passed on, which can especially cause problems if employees are not familiar with the proper ways of work.

In my opinion, the crucial point in the study is the training programs of the qualifications examined, on one hand regarding the utilization of professional knowledge and the length, the popularity and management of the training on the other. Thus primarily the deterring image of vocational schools is said to cause early cases of dropping-out and decreases in the willingness to take part in training.

All the fields – technical, know-how, forage, physiological and labour safety – necessary for large-scale farming (or small-scale farming) plants are covered in the central programs of qualifications examined, so the difference is shown in the depth and ratio of the professional knowledge of the respective fields, however the practical use of the competences listed in the programs cannot be stated unambiguously.

Acquiring the subject-matter by the students would enable them to carry out a thorough training of a labourer with complex knowledge, but it is doubtful to what extent the students with poor learning abilities and rather defective basic knowledge would be able to acquire the necessary skills. First of all the statement refers to the NQR qualifications within the vocational training system, while courses for adults outside of NQR may give shorter, more concise and real practical training.

With respect to the qualifications examined, it is important how independently one can work; that is whether they can work without due instruction, what creative activities they can do, if at all?

Qualifications of cattle breeder and stockbreeder, out of the qualifications examined, give such output which enable the labourer, under due instructions, to execute the tasks in animal keeping professionally.

The training for stockbreeder and animal health technician is at higher level enabling one to make decisions independently within the system. Training for agricultural machine operators and agricultural machine operators and repairmen are more specialized qualifications, due to their character doesn't cover the other activities at the plants since their scopes are restricted to machine operation, repairs, maintenance and doesn't provide basis to see through the biological, ethological relationship within the production.

The qualifications of inseminator were not considered as physical work for long. Changes have affected it as well, the job of an inseminator has become a secondary activity for physical workers and unfortunately this strategically important job is carried out with limited and incidental knowledge and experience. That's why the training of inseminators was involved in the study; hence due to its specific aspect it presupposes much deeper theoretical and practical knowledge and complex information on production process. It also refers the to milk product maker qualification. In case of large-scale milk producing plants with up-to-date technology the job of a milk-tender which in its job description is closer to food industrial labour activity, but in quality-oriented milk-producing system its importance and responsibility are undeniable.

It can be stated as essential that the vocational training structure can only serve the supply of a workforce of a given sector, if regional spread of training matches the potential trainees'

mobility and residence. Regional mobility in case of employees in animal keeping is not too intense; typically their place of work matches the place of residence. One of the major points for the employees surveyed in choosing the place of work was the vicinity of their residences and their work schedule in animal keeping acted as an important factor too. The place of training can be important primarily in case of non-system training. During the analysis I divided the aforementioned trainings in 4 groups (*Figure 1.*) considering the level of the given training and the type of work processes and jobs at the plant the training is needed for.

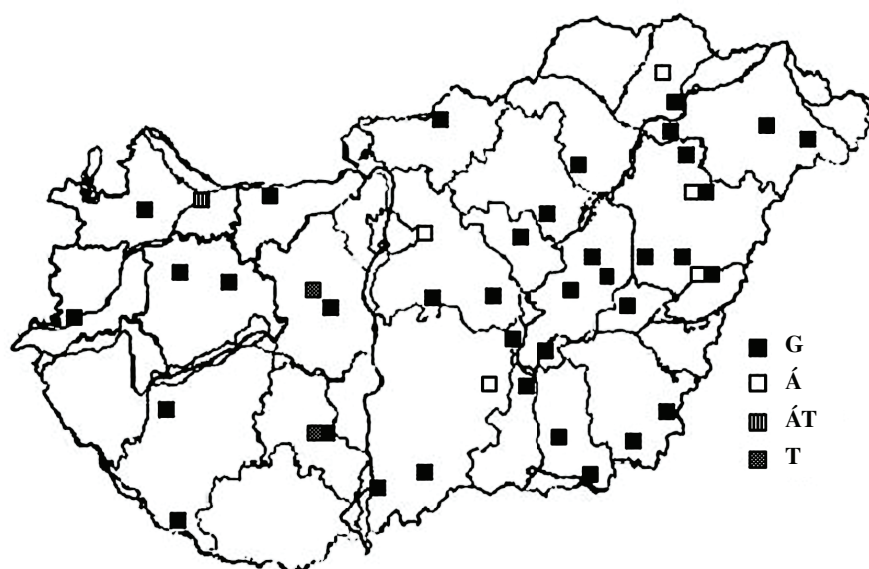


Figure 1. Regional location of in-system vocational trainings examined in Hungary

Source: NIVE (2009)

Legend

G	– agricultural machinist and repairer	(31 521 01)
	– Agricultural machine operator and repairer	(31 521 20)
	– Agricultural machine operator	(31 521 19)
Á	– cattle breeder	(31 621 01)
	– Stockbreeder	(31 621 03)
ÁT	– Stockbreeder and animal health technician	(54 621 03)
T	– Dairy product maker	(33 541 07)

Squares on the map show the schools where in-system trainings of the given qualifications (-group) take place in the school year 2008/2009. It is clearly seen that training for engineering are dominant and the regional spread of the trainings is uneven as well. Trainings for animal keeping take place only in six schools in five settlements in Eastern and Central Hungary.

Present Hungarian statistical data analysis doesn't contain information on the regional spread of large-scale cattle farms. If the regional spread of trainings is compared with the number of cattle supposing the sizes of the cattle farms in the region don't show significant difference we can examine whether the demand for training structure is met and that training is available where they are needed in the labour market.

Figure 2. clearly shows that the number of cattle in two Mainland regions is the highest. This is followed by the trainings for engineering in relation to trend and spread; however the rest of the trainings do not meet or hardly meet the expectation.

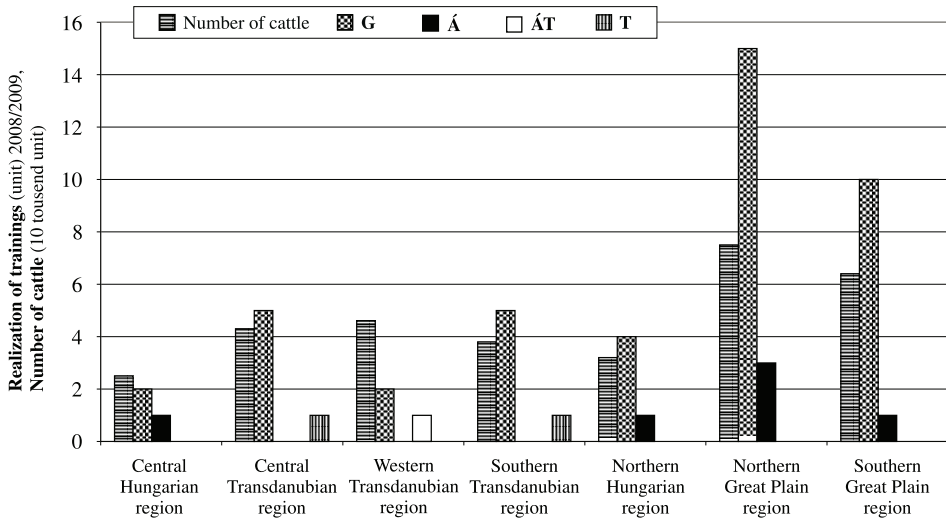


Figure 2. Distribution of trainings examined and the number of cattle in the regions of Hungary

Source: edited by the author based on *RIAE* and *HCSO* (2008) and *NIVE* (2009)

A magyarországi állattenyésztési szakképzés vizsgálata a nagyüzemi szarvasmarhatelepek fizikai munkaerő utánpótlásának szemszögéből

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ÖSSZEFOGLALÁS

A hazai mezőgazdaság elmúlt 15 évében bekövetkezett változások a gazdálkodási tényezők minden elemét érintették. Megváltozott birtok- és üzemstruktúra, likviditási gondok, az agrárrolló nyílása és a szabályozási rendszer gyökeres átalakulása jellemezte az időszakot. Az állattenyésztés aránya a nemzeti agrárvolumenben jelentősen csökkent, a folyamat érintette az összes állatlétszámot, a gazdálkodók számát és a gazdaságonkénti állatlétszámot is. Ennek közvetlen hatása az állattenyésztéssel foglalkozó munkaerő létszámának csökkenése. A kvantitatív csökkenés mellett megfigyelhető a munkaerő összetételének változása is, amely többek között következménye annak a gazdasági-társadalmi átalakulásnak, amely a vidék, a mezőgazdaság szerepét, megítélését kedvezőtlen irányba mozdította.

A szakképzési rendszer alkalmazkodva a piaci elvárásokhoz, oly módon változott, hogy csökkent a mezőgazdasági képzések, ezen belül is az érettségit nem adó képzések aránya, a jelenlegi képzési struktúra ráadásul területileg sem homogén, bizonyos régiókban egyáltalán nincs elérhető állattenyésztési szakképzés.

Az állattenyésztési munkák nagy része nem követel meg jogi alkalmasságot, a foglalkoztatott munkaerő esetében a kiválasztás családi, lakóhelyi ismeretségen keresztül történik, és általában szakképzetlen alkalmazottakat foglalkoztatnak. Az állattenyésztés jelenlegi működése még megvalósítható az emberi erőforrások korlátozott szintjével, de a jövőre vonatkozó prognosztizált változások már megkövetelik az új típusú szakmunkás alkalmazását, amelynek képzése az átalakulás alatt álló szakképzési rendszerben, átgondolt képzési célokra épülve valósulhat meg.

A jelenlegi szakképzési változások hozzájárulhatnak az állattermék-előállítás hazai színvonalának fenntartásához, amennyiben megvalósul az igények, munkáltatók részéről történő beazonosítása, és az oktatáspolitikai változások a társadalmi és gazdasági igényeknek megfelelően határozzák meg az új kereteket.

A vizsgált területeken mindenképp a felnőttképzési lehetőségek bővítése, a képzők és gazdálkodó szervezetek mostaninál jóval erősebb együttműködése mutathat kiutat.

Kulcsszavak: állattenyésztés, tejtermelés, munkaerő, szakképzés, foglalkoztatás.

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