

Selfevaluation Report – MUAF in Brno

version 2

MZLU v Brně

February 2005

I INTRODUCTION

1. The reasons why MUAF in Brno is entering for the evaluation

Mendel University of Agriculture and Forestry in Brno (MUAF) as an institution involved in participation of the Czech Republic (CR) in EU educational programmes tries permanently from the very beginning (mid-1990s) to improve its educational and research activities.

To verify the implemented changes it continuously takes part in various international evaluation projects:

- In 1995 the Faculty of Economy and Business became a member of the *European Council for Business Education* (ECBE) and signed up for its accreditation procedure (1996). After an international evaluation it obtained in 1996 a 4-year international ECBE accreditation for its study programmes and subsequently a re-accreditation (2000) for another 4-year period.
- Participation in the TEMPUS project *Internal Evaluation Systems at Agri-Universities* (1998) allowed to all the faculties an international evaluation by the evaluation commission consisting of representatives of the Universität für Bodenkultur Wien, Wageningen Agricultural University, University of Plymouth and Humboldt Universität zu Berlin.
- In 2003 MUAF applied for a consultation and evaluation visit of an international team evaluating the implementation of ACTS and the *Diploma Supplement(DS)* . The commission reported (March 2003) considerable progress in the implementation of qualitative ECTS criteria and the team members provided practical advice and instructions when adopting the DS. Since September 2003 the DS are delivered to all MUAF graduates of Bachelor and Master Degree programmes.

With regard to the achieved advancement in educational and research activities at European universities and considering the determination of the university to continue in improvements in this area, MUAF made the decision to undergo extensive international evaluation, which would be a strong impetus. It was felt that this was a particularly auspicious time to undertake such an exercise. In the past five years the university implemented a number of qualitative changes, a marked advancement in virtually all areas of university life was seen and thus an external evaluation coupled with quality control would provide an *opportunity to check the effectiveness of the implemented changes*. Ending 2005 the present rector of MUAF will terminate his second and last term of office and evaluation of the kind provided by the EUA would, among others, serve as a document balancing the advancement process of the university and enabling to declare the possible courses of action for the future

2. Structure of the evaluation team

The rector of MUAF selected the members of the evaluation team as a crosscut through the university – teachers, heads of faculties, office workers, and member of the Senate on behalf of the academic community (see Annex No. 1 for a list of the members and their positions).. This model makes up a medium-sized group of people with experience and understanding of various areas of the academic environment capable of generalising attitudes on issues from their own competence in a wider context. Elaboration of the document was limited by the deadlines, complexity of the task and that an optimal and effective method of analysis had to be selected, so we selected the form of a questionnaire, particularising the report and assigning the individual parts to all, and/or to some, members of the team. The self-assessment was elaborated by summarising partial documents, comments and suggestions of the university management.

3. Higher education and research in the Czech Republic

In the Czech Republic higher education is provided by university-type and non-university type institutions, by both private and state universities. On a regular basis the State Accreditation Commission evaluates the university study programmes of all these types of institutions .

Universities provide bachelor, master and doctoral degree programmes; most of these institutions (25) are *public*. Within their scope we find *general (traditional) universities* providing humanities and social sciences (e.g. law, economics, medicine), *technological universities* specialised in engineering branches and areas such as agriculture, chemistry, electric engineering etc. and *universities of the artistic type* (Academy of Music and Performing Arts). All the universities comprise a number of faculties. Non-university higher education institutions provide bachelor degree programmes only.

Private universities have been established in the Czech Republic since 1998 (37 at present) and are mostly specialised in one field (economics, finance, law) and only rarely do they exceed the scope of bachelor studies.

Military universities and Police Academies are *state universities*.

Public universities are financed by the state budget through the Czech Ministry of Education, Youth and Physical Training (MEYPT), state universities by the budget of the Czech Ministry of Defence or Ministry of the

Interior. Private universities are state-funded only partly. University education in the CR is determined especially by

- the legal framework, i.e. Higher Education Act (1998)
- guidelines of the MEYPT - state administrative authority administering the universities
- international activities of the CR, incorporating universities in projects set up by the Committee for Science and Higher Education of the Council of Europe.

Research activities in the CR are handled by the *National Research Programme* and R&D programmes, which the government approves and ensures their implementation. To its content contribute i.a. *Grant Agency of the Czech Republic*, *Grant Agency of the Czech Academy of Sciences (research institutes)* and *the respective sectoral institutions (especially MEYPT for all universities and higher education institutes)*. The *Czech Government Council for R&D* makes up – in accordance with the *Czech Ministry of Finance* -the central budget.

R&D is subsidised in two ways: a) *specific funding* (grant projects, programmes, projects for state administration) – specific funds are provided as *subsidies* or *loans*, b) *institutional funding* (funding provided *on the basis of evaluations of the results of R&D activities*). The legal framework for public funds provides the R&D Funding Act (2002).

Since 1993 a national database of all R&D projects (CEP) has been established and in 1996 a database of publications (RIV) and database of research projects of institutionally funded organisations (CEZ).

4. Mendel University of Agriculture and Forestry in Brno

4.1 History and structure

Mendel University of Agriculture and Forestry in Brno (MUAF) is the oldest independent university of its kind in the Czech lands (1919 – then the called University of Agriculture in Brno); the establishment of the university was the culmination of long-lasting efforts calling for the establishment of an agricultural university, which it was felt necessary in order to maintain the high standards of Czech agriculture, the highest in Central Europe. In 1995 the university was re-named Mendel University of Agriculture and Forestry.

In the almost 90 years of its existence, the university executed a number of re-organisations, in terms of the structure, conception and quality, and has graduated more than 20,000 agricultural engineers, more than 6,500 forest engineers and nearly 5,500 economists.

At the time of its establishment the educational programme was based on the original branches, i.e. agriculture and forestry, to be gradually extended considerably adding new study programmes structured according to the immediate or more effective requirements of the society and changes in the study profiles of universities. The primary tasks of the period after 1989 were to change the number and structure of degree study programmes and branches (1990), a reflection of the demands for university-trained specialists in accordance with the social and political changes in the CR and countries of Central Europe, and currently with preparations and entrance of the CR into EU.

At the present transition period to a three-degree *university study-system*, the university provides 15 study programmes with 27 specialisations for bachelor degree studies, 12 programmes with 29 specialisations for master studies, 13 programmes with 17 specialisations for 5-year master degree studies and 16 programmes with 28 specialisations for doctoral degree studies (Annex No. 5). The *Centre of Lifelong Learning* at MUAF provides since 2003 studies in courses of Lifelong Learning (11 professional courses, 4 language courses) as well as the education in the *University of the Third Age* (teaching in semesters).

Numbers of students enrolled for studies considerably increased in the last years. From 3532 ordinary and part-time students in the academic year 1993/1994 the numbers increased to 7275 (more than 100%) in the academic year 2004/2005.

Since its establishment, the *scientific and research activities* have been an important component of the university. The research programme always embraced a very wide *scope*; in each stage of the history of the university it corresponded with the diversity of specialisations of the faculties, and was based on the commitment to conduct research and development in all branches of the university's educational system to adapt to the required advancement of scientific disciplines and also to the social and economic demands of agriculture, forestry and economics. On these lines the scientific and research programme of the university in the 1990s was influenced by two facts. The first was the global call for sustainable agriculture and the agrarian sector, especially its irreplaceable role as the vehicle of non-production functions in the economic, technological and social sphere, the second was specific for the transforming economies and in agriculture was associated with control over the complicated processes of restoring proprietary rights, market environment and with the application of reformed economic policy, and later particularly with preparations for accession to EU.

The MUAF has *four faculties*; Faculty of Agronomy, Faculty of Forestry and Wood Technology and Faculty of Business and Economics based in Brno, the Faculty of Horticulture is based in Lednice. In terms of the structure of the faculties (Annex No. 3), there are 45 institutes/departments, 363 academics, 98 researchers and 333 administrative staff members.

The university has also some *all-university entities*: Department of Scientific and Pedagogic Information and Services, Department of Information and Communication Technologies, Centre of Lifelong Learning, Department of Language and Cultural Studies, Botanical Garden and Arboretum, and so called *special-purpose facilities*: Central Management of Student Residences and Canteen in Brno with an branch office in Lednice.

MUAF also runs two *university business units*: Agricultural Farm Žabčice (acreage 2730 ha) and Training Forest Enterprise “Masarykův les” (Masaryk’s Forest) in Křtiny (10200 ha). Beside the profit-making business activities the farms provide for the practical training of students in research activities, professional and laic public professional consultancy, assistance in development of non-wood-producing function of forests as the recreational surroundings for inhabitants of the Brno region and – last but not least - maintain and protect the Landscape Monument, the Lednice-Valtice area listed by the UNECSO.

4.2 Assessment of the university structure and resources

Although the university is a single legal person (in terms of budgeting and contracting), the faculties have considerable independence provided by the law. However, they are also responsible for drawing up the study programmes, organisation of research activities, deciding their financial strategy etc. At the same time a necessary degree of co-ordination in the principal issues of education and research is guaranteed by internal university documents e.g. *Academic Regulations* (see Annex No. 2), ensuring an integrated 3-degree structure of studies (BA/Ma/PhD), *Criteria for assessment of the scientific and teaching qualification of applicants for associate professor or professor nomination* (unified promotion and conditions for career advancement), *Rules for Joint Research* (uniform financing and the role of subjects) and the *Rules for the use of financial support of research and development from public funds*.

In the area of human resources the university stands above the average as to the terms of the qualification of the teachers, experience and qualification of researchers and standard of the academic and administrative management. A number of teachers and researchers have achieved international reputation; on a national scale the students of the university are also successful on the labour market and in the Moravian Region of the Czech Republic they take up positions important nationwide in institutions, companies and bodies of state administration.

The increasing enrolment rate in the past years has brought more finances to the budget; on the other hand, however, it increases the demands for teaching space. For this purpose the university has built a new multi-functional pavilion Q (2004) with accommodating space for 2065 students.

II WHAT IS THE UNIVERSITY TRYING TO DO?

1. MUAF’s MISSION

MUAF is a public university, a centre of excellence in teaching and research. It plays a key role in the scientific, social and economic development of the society.

The long-term plan of educational, research and other activities of Mendel University of Agriculture and Forestry in Brno (thereinafter “Long-term plan of MUAF”) is based on the *Long-term project of MEYPT* (1999) and other national and international documents on the development of science and higher education. It considers material predicting the development in agriculture, forestry, the processing industry and the environment, documents on the objectives and policy of the Czech government in these areas and the principles of the *Common Agrarian Policy of the EU*.

MUAF further completes the mission of a university specialising in:

- Study programmes preparing university-educated experts for agricultural and forest primary production, for processing agricultural and forest produce and their trade, for the development of non-production functions of agriculture and forestry, creating an agricultural and forest landscape and for the formation of the natural component of the environment of housing estates. The integrating scientific element of this educational programme is sustainable use of natural resources of agriculture and forestry,
- Study programmes prepare the university-educated experts for business management and economics, business activities, financing and economic informatics who will find jobs particularly in firms of the national economy; coupling with the other faculties of the university it creates extremely favourable

conditions for the graduates to find jobs in the agricultural-food and forest and wood-working sectors and when developing economic activities in the rural development area.

The ongoing complex transformation of Czech agriculture gives rise to a number of questions about the direction and scope of the university's educational programme. Demands resulting from the economic reformation in agriculture after 1989 led to this transformation. The number of students of the traditional agricultural study programmes was reduced and new courses were launched (see 2.3.). Notwithstanding the complicated development of agriculture in the past period, the university directed the educational programme and major part of science and research at future agriculture and the food industry and the future forestry and woodworking industry. It also had, and still has, a significant share in professional consultancy.

On a general level MUAF's research programme pursues the current trends of the present development of scientific disciplines, in particular biology, and their application in agricultural, forest, horticultural and economic sciences. In practice it means targeted control of biological processes, effective use of non-renewable natural resources under sustainable, multi-functional agriculture and agro-business. The focus is primarily on the quality and safety of agricultural products in general and particularly foodstuffs under conditions of increasing competition on the liberalising global agricultural market. Consistent with the conclusions of the Common EU Agricultural Policy the university gives priority namely to multi-functional agriculture and forestry, the importance of their production and non-production functions in landscape formation and rural development.

1.1 Local, regional and national context of MUAF

Brno as the second largest city in the Czech Republic is home to six major higher education institutions: MUAF, Masaryk University, University of Technology, University of Veterinary and Pharmaceutical Sciences, Janáček Academy of Music and Performing Arts, and the University of Defence. With a population of more than 400,000 Brno has more than 50,000 students, which is the relatively highest concentration of university students in the CR. Co-operation of Brno universities with the *Brno Town Council* led to contractual obligations resulting in the approval of the official policy of the city called *Brno – the University City* (1998). Another result of this co-operation is the establishment (2002) of the *Brno Centre of European Studies* (BCES), association of Brno universities and the City of Brno aimed at the advancement of co-operation among universities, businesses and the Region in keeping with the declared principles of the European Social Fund and Operation Programme for the Development of Human Resources (co-operation between research institutes and businesses, enhancement of innovations, development of the linkage between the labour market and educational institutions, consultancy).

Since 2003 similar connections have been established with the new regional body *South-Moravian Region* (one of the 14 regions of the Czech Republic), namely a co-operation agreement with the regional authority. Since 2004 the university has been a member of the *South-Moravian Innovation Centre* (association of legal entities and accredited member of the Society of Scientific-Technical Parks and member of the G2G Incubator Forum, partner of the Regional Contact Organisation for the VI. RP EU). At the beginning of 2005 the *Regional Agrarian Chamber of the South-Moravian Region* invited the university to co-operation when launching and running the *Regional Information Centre for Agriculture and Countryside Development*. The professional bearing of the university provides a good background for co-operation with the regional authorities, institutions and firms.

By co-operation with the regional authorities and Brno universities MUAF contributes to the development of the region, a region associated with the world-renowned scientist J. G. Mendel, whose name the university has born since 1995. Unique is the fact that the university profile corresponds with the character of the region, typical for advanced economy and education; on top of that it is a very large region with extensive agricultural production, including viticulture, fruit growing and forests as the basic element of the ecological stability of the landscape and incorporating the Protected Landscape Area, the Lednice-Valtice area on the UNESCO list.

For nearly 90 years of its existence the university gained an irreplaceable national-wide position as an important educational and scientific-research institution in agriculture, forestry and economics. Beside MUAF there are two similar universities – the Czech Agricultural University in Prague and the South-Bohemian University in České Budějovice. MUAF co-operates closely with both in all academic branches. *On a national level* the MUAF is the only university providing horticulture and garden and landscape architecture - at the Faculty of Horticulture in Lednice.

1.2 Balance between teaching, research and other activities

MUAF sees itself as a *research university* because research, development and creative activities are its integral part. It is based on the large range of accredited doctoral programmes and accreditation to carry out habilitation for associate professors (in Czech “docent”) in 30 scientific branches and to appoint ordinary professors in 28 scientific branches.

The university represents integral part of the *educational system and scientific-research basis of the Czech Republic* and carries out expert and other professional activities at national level for the Czech Ministry of Agriculture, Czech Ministry for the Environment and for other state administration authorities in agriculture, forestry, horticulture and viticulture. It further delivers assessments of legislative standards, primarily in terms of their compatibility with EU standards, carries out methodical-counselling, professional technical and design and projecting services and *advisory service* in the area agriculture and forestry, floriculture, landscaping and nursery management, ornamental horticulture, and agronomical and economic consultancy.

1.3 Academic priorities of the university

Long-term experience in issues concerning the development of the relevant scientific branches as well as co-operation with prestigious universities and research institutes enabled an active participation of the university in the social and economic transformation process after 1989.

This has gradually formed the research priorities of the university in some *important research projects* concerning i.a.

- *Regulation of biological and technological processes for competitive multi-functional agriculture*
- *Regulation of plant growth and development*
- *Molecular embryology – the key to healthy farm animals*
- *Sustainable forest and landscape management*
- *Wood from forests affected by human activities – properties, use and effect on inhabited environment*
- *Regeneration of monuments of landscape architecture and garden arts*
- *Forming the structure of agri- food sector and its competitiveness.*

The biological and technological issues could - to a considerable extent - link up methodologically and factually to the research developed in the 1970s and 1980s, e.g. in the framework of the European project *Man and the Biosphere*. However, the economic and sociological research change its orientation to completely new issues. In the first instance a new theoretical and methodological base had to be created; very helpful in this respect was intensive co-operation with the US and West-European universities.

Essential conception of the university gives the *Long-term plan of educational, scientific, research, and other activities of MUAF in Brno for 1999-2005*. According to it R&D at the university is considered to be the second principal component of activities along with education. The university co-operates in research both with institutes of the Czech Academy of Sciences and with sectoral research institutes.

The strategic objectives of the university are targeted to an increase of the budgetary resources for R&D, to the efficient use of the available capacities and their concentration into larger research units and team research work. In research activities MUAF supports within the university *strengthening of a competitive environment*, especially by distributing funds according to presented results evaluated by transparent and independent procedures.

The main academic priority is the *excellence in teaching*. To achieve this goal the focus of MUAF is on:

- High standards of bachelor, master and doctoral degree programmes,
- Adaptation of the graduate qualification and profile to the instant social requirements,
- enhancement of quality of the academic staff as crucial condition for excellence in teaching and for successful acquisition of associate and ordinary professor,
- proving the excellence in teaching by the quality of students, graduates and potential employers,
- Internationalisation of education.

1.4 Preferred didactical approaches

Under the present conditions of university development with a strengthening demand for the *learning society*, MUAF tries to introduce means allowing not only to improve existing forms of studies, such as lectures, practical training and seminars, but at the same time helping to develop active methods of teaching, such as *case-studies* or *e-learning*. The university applies both methods based on e-learning courses - relatively independent units with a well-defined educational goal, own teaching aids and tools. The contemporary education by means of e-learning is called sometimes as *blended learning* – a co-ordinated use of classical and e-learning forms. The university system *ELIS (E-learning information system)* is developed by using the database of the *University Information System (UIS)*. It consists of three modules: the first solves the formation and presentation of teaching props; the second supports administration of the system, organisation of teaching material, evaluation and testing, communication and co-operation between teachers and students; and the third ensures a centralised approach of users of the e-learning system to the required information.

For further development in the use of new methods and expected changes in their forms see 6.3.

1.5 Desired degree of centralisation and decentralisation

The university goes in for only such a degree of centralisation, which *enables to improve the quality of activities* and which in no case *restricts creative activities* of the departments and faculties of the university or of the individual workers.

At the *managerial level*, the degree of centralisation and decentralisation is at present largely affected by the legislation i.e. the *Higher Education Act* and the *R&D Development Act*, partly also by the historical development of the faculties and the university. The rector of the university manages the deans of faculties, the university bursar and heads of other university units (manager of school farms, manager of students' residences and canteens).

At the *level of the individual university activities*, the degree of centralisation and decentralisation is different, partly due to

- faculty decisions on the creation and implementation of accredited degree programme pursuant to the Higher Education Act; this principally positive decentralisation element reduces on the other side the influence of the university when designing and implementing inter-faculty or inter-branch study programs. That is why the university has established the University Accreditation Commission, which co-ordinates the creation and implementation of study programmes.
- faculty decision about the orientation and organisation of the R&D; the main principles of scientific policy are defined in the R&D Development Act, the main directions in R&D are declared by the university, which sets up convenient financial, material and technical conditions. In this respect the degree of centralisation and decentralisation is proportional. Grant-funded research provides the maximal rate of independence in the research; the only restrictions are associated with the declaration of the subject in the framework of the respective grant agencies and naturally with the method of financing, which the legislation determines.
- Decentralised decision-making in labour relationships (i.e. recruiting personnel, employee rating and financial valuation); allocation of staff to categories is subject to central criteria and is executed with the rector's consent.
- Basically centralised decision-making in managing some all-university units like Centre for Lifelong Learning (incl. the University of Third Age), Department of Language and Cultural Studies, Department of Scientific and Pedagogic Information and Services, Department of Information and Communication Technologies; university management safeguards uniform quality and standard of its activities.

1.6 Relationship to funding agencies

Under the Higher Education Act the university is a public higher education institute. The Ministry of Education is its administrative and managing authority. Pursuant to the State Budget Bill the main activity of the university is financed through state subsidies and the Ministry specifies the amount basing on qualitative factors and indicators quoted by the State Budget Bill. The subsidies are purpose-fixed and accountable. Rules on the use of budgetary funds regulate the allocation of the subsidies within the university and their accounting.

Under the above regulation the university lacks primarily a longer-range stability of budgetary rules from the Ministry and binding methodical opinions on the generally binding legal, accounting and tax regulations for public universities.

1.7 Relationship of the university and the society (external partners, local and regional administration)

The relationship between the university and the society, external partners, local and regional administration, and engagement of the university in discussions on public affairs is given by its *position in the Czech educational system*, based on its professional ability, attested accreditation processes and its *position in the Czech scientific and research community*; at the same time the university strives to exceed the scope of its basic activities beyond the Czech Republic.

In this area is MUAF respected as a highly experienced education and research university with extensive consultancy activities. It is a partner of research institutes, institutes of the Czech Academy of Sciences and other R&D institutions. It is invited to consultations on developing programmes in agriculture, forestry, environment, local development and selected central bodies (Czech financial and banking institutions). MUAF is partner to a number of enterprises, state and regional administrations. The co-operation with enterprises is for MUAF of primary importance and crucial for its educational activities. The feedback (opinions on the application of graduates and their incorporation into social practice) is considered to be decisive for the evaluation of the quality of education.

The professional orientation of the university is essential for its involvement in public discussions on issues of the ecological stability, nutrition of the population, renewability and sustainability of raw-material resources, development of the rural landscape, market economy, purchasing conduct of the population etc.

The ties between MUAF and state administration within the region in the area of the official policy of *Brno – the university town*, among Brno universities in the *Brno Centre for European Studies*, in the area of co-operation with the South-Moravian Region when establishing and operating the *South-Moravian Innovation Centre*, here it is namely joint preparation of a project to win funds from the Operation Programme Development of Human Resources, for measure 3.2 Support for Tertiary Education, Research and Development – preliminary title *From Education to Innovations*, co-operation in preparations of the *Regional Information Centre for Agriculture* are very strong.

1.8 The university's international policy

At present the international policy of MUAF and the *internationalisation of MUAF* is a necessity dictated by the existence and building of the so-called European Research and Education Area. MUAF is therefore:

- developing study programmes at all three levels accredited for teaching in foreign languages,
- sending MUAF students to study abroad and admits foreign students to MUAF (inclusive provision of services for international students),
- participating in establishing of international networks of co-operation, following its participation in EU educational programmes,
- maintaining and developing active membership in European and world international non-governmental organisations,
- establishing co-operation and implementing bilateral agreements on co-operation with universities in Europe and outside Europe,
- participating in international conferences and seminars and organising such conferences.

On university policy with regard to foreign countries see details in *MZLU European and International Policy Statement* (Annex 25).

2 CONSTRAINTS AND OPPORTUNITIES

2.1 Selection and appointment of academic and administrative staff

According to legal regulations, the posts of academic staff (teachers and researchers) can be filled only on the basis of *announced selective procedure*. The *Selective Procedure Regulations at the MUAF in Brno* (1999) and the *Recommended Principles for Academic Staff Entering Employment* (1999, Rector's Decision) are effective for filling the posts of academic staff at the University.

The *Criteria for Assessment of the Scientific and Educational Qualification of Applicants for Posts of Associate Professor or Professor* (1999, 2004) is the tool for career promotion; in this way the university seeks to maintain a high standard for the initiation and process of procedures associated with the awarding of degrees.

The tool for financial promotion is the internal directive of the university *MUAF Payroll Regulations* (1999) specifying the *pay level* based on the educational background and experience and the *so-called floating wage component – personal assessment* based on the quality of the job done.

MUAF does not *provide creative leave of absence for the academic staff* although envisaged by the law.

Restrictions when selecting academic and administration staff and when applying methods of career promotion:

- Financial restrictions are based on the level and possibilities of financing the university (budget); it is often difficult to pay the university teachers and scientists adequate wages (nonetheless the average wages of these categories at MUAF are higher than the national average). The result is frequent staff turnover and departure, particularly of young scientists, to the private sector. Furthermore, many teachers feel forced to look for sources of additional incomes. The consequence of financial restrictions is the decreasing number of students per one teacher (1999: 13, 2004: 20).
- The lack of qualified university experts with degrees is the consequence of financing in the state sector compared to the private sector. The lack of good-quality and qualified “human resources” makes it possible to fill the academic posts “through inertia”. This phenomenon has deep roots in the Czech university system generally, including the tendency of teachers to spend their entire productive life, starting with university studies, at one university. As a result we might see the university addressing academic personnel outside MUAF “making offers they could not resist”.

The financial restrictions also make it impossible to select and employ administrative staff as the universities are in no position to compete with the private sector (often public service or banking). The university is making efforts to adopt “political decisions”, which would enable to offer, at least the top

senior executives and managers in administration, adequate wages (these categories are below the national average at MUAF). The university is making efforts to extend the principles for filling top posts in keeping with up-to-date managerial methods (considered is the command of languages, managerial skills, previous practice, education etc.).

2.2 Selection of students (including adult education)

In recent years the selection of students was affected by the re-structuring of the business sphere and of the entire national economy, which gave rise to considerable *changes in the demands for MUAF graduates on the labour market*. The university conformed to these changes by extending the selection of students by means of *new and diversified study programmes* (see 2.3.). As a result the *demands* for studies at MUAF have tripled over the past 10 years. The coefficient of interest, i.e. number of applicants per one enrolled student, ranges between 1.5 and 2.5 in biological and technical programmes and between 3.5 and 4.5 in economic programmes.

The selection of students is also *optimised by the growing demand for tertiary education*, which the university and students consider to be a qualitatively higher condition for obtaining more convenient/better paid employment. The selection of students reflects both the labour market and the national demographic development. The selection of students taking into account a *proportional development of all faculties* is regulated only partly due to the present labour market and different demands for specialisations.

When selecting students the university applies the *principle of open and equal approach to studies*. However, it is limited by *regulation measures of the Ministry of Education* concerning the increasing number of students (financial regulation). In the academic year 2004/2005 for instance 51% of the applicants met the conditions for enrolment (8092 out of the total number), but only 31% could be enrolled (2494).

As the criteria for admission of students is used also the *capacity and the accommodation facilities of the university*. The number of rooms was considerably extended when the new multi-functional “Pavilion Q” was built (2004). Accommodating 70% of students ranks MUAF, together with the University of Technology in Brno, among the most successful universities in Brno.

MUAF can influence the selection of students to a certain degree by *informing the public* about the availability and prospects of studies, and generally about the university, on the web site of the university, by participation in Educational Fairs “Gaudeamus” and “Akadémia” , by holding “Open Days”, staging discussions at secondary schools about the studies, and information through mass media.

The university applies diversification of studies and open approach to education also in *Lifelong Learning* and the *University of Third Age* where it implements its new mission in adult education. The university has as yet unexploited opportunities in *the area of re-qualification courses* in co-operation with Employment Bureaus and in the framework of the *career advisory service*.

Rules for enrolment of students to the university as to *qualification standards* are given by the Higher Education Act. If the number of applicants is higher, the university employs the possibility to apply further conditions (e.g. passing the entrance examination).

2.3 Teaching and learning, research

Changes in the social and economic system after 1989 gave the chance for MUAF to share the European educational and research environment and activities. The process culminated by the accession to EU (2004) enhancing *the opportunity to advance educational and scientific-research activities*.

The university is making use of these opportunities to focus on the corresponding European system of education and research, to expand its scope of activities and participation in the areas of:

- Diversification of educational programmes, their internationalisation and formation of a priority value orientation of the graduates,
- Changing demands of the society and labour market,
- Development of knowledge in scientific disciplines reflecting international trends in biological, agricultural-forestry and economic sciences
- participation in EU Framework Programmes.

Education at the university in the form of accredited study programmes is implemented in a *three-degree system* at four faculties. Over the past 15 years the number has remained the same, *priority was rather given to the development of some scientific disciplines* and then the *study programmes* of the faculties were diversified. Remodelling the content of these programmes led to *changes in the organisation of the faculties* (new departments were established, existing departments reorganised) and involved namely the creation of such programmes as: biotechnology of plants, agroecology, food technology, animal biotechnologies, plant protection, landscape engineering, timber engineering, operation of technology, automobile transport, protection and use of land resources, waste management, processing horticultural products, management of garden and landscape design, viticulture, economic policy, economic informatics, finance, administrative management, economy of agriculture and the food industry (for complete list of programmes and courses go to MUAF Statute, add. 6).

In terms of the social and economic changes the *new opportunities in research* became a part of the *newly formulated priorities in scientific and research projects* of the university (see academic priorities); other opportunities were seen in the *use of the intellectual potential of the young generation*, particularly in the area of joint research activities with students, establishment of the *Internal Grant Agency of MUAF* and in massive involvement of young scientists in selection competitions of the Czech Grant Agency (so-called post-doctoral grants), other opportunities in research unfolded in the EU Framework Programmes, which became fully accessible to CR as a EU member on 24 April 2004. In larger research units the multi-branch orientation enables the university to use *more complex approaches and multi-branch elaboration of the topic*.

Generally the *restrictions in education and research* are dependent on GNP sources granted for education and research and on their re-distribution to the respective sectors – i.e. *state policy of education, research and development*, also in the forms of management (state finance of an institutional character – purpose financing of the grant agencies – absence of participation of the private sector) and on the degree of centralisation and decentralisation of management within the university and faculties.

The *standard of academic degrees* (associate professor, professor) is based on qualitative indicators of educational and scientific-research qualification as declared in the Act on Universities.

Restrictions (on the contrary also opportunities) are also associated with the proportion of dispensable and free capacity (human resources) and its quality, with methodical elaboration of the programmes, quality of the teams, quality and availability of information aids and material-technical background. Of no lesser importance is flexibility in tackling problems, optimal integration with the national and international community in education and research and co-operation with other institutions. Opportunities and restriction in research are connected with optimal proportions and combinations of theoretical and applied research, optimal implementation of innovations etc. The university monitors these elements, which can be a component of educational and scientific-research activities depending on *their current existence or absence, immediate and optimal degree* in their advantages or, on the other hand, restriction of the process, *within the control system of operation* of both process (teaching and research) and their quality.

2.4 Finance

As restriction is felt that 90% of the university's operations are funded by *the state*. The state allocates the finances and thus the university is from great part dependent on the state resources. The university generates its own resources within its principal and supplementary activities – 10% added to the revenues. The ability to generate own resources is limited by law and financing from *non-governmental sources* (fees paid by self-payers, payment of lifelong educational courses, fees for entrance procedures, donation gifts) is only minimal contributions to the budget.

The only, but very important, means and method of how to contribute to the budget is *own active and creative activity in the area of grant-funded research*. The university "has learned" how to obtain valuable funds in this way, the benefit is naturally not only financial. The contribution of grants and research projects based on selection procedures of national and international grant agencies to the budget of the university amounts to an average of 90 million CZK a year (ca. 20 % of the annual incomes of the MUAF).

For more data of the fiscal year 2003 see Annex 24 – University Budget Incomes

2.5 Evaluation of the present situation in the region and labour market

There is not a positive correlation between the level of students' qualifications and their success rate in obtaining employment. This is due to students' selection of courses lagging behind changes in the labour market

Therefore the university is forced to monitor the job market and allocate places on different faculties and study programmes accordingly. In 1998 the university established contacts with all employment agencies in the CR and with the Czech Ministry of Labour and Social Affairs, and is monitoring the situation on a regular basis. In 1999 the university launched a pilot research project monitoring the application of graduates from all faculties. Since 2000 the situation is monitored on a regular and standard basis. Systematic research provides the university with information about the rate of unemployment of the graduates, difficulties they have to face when seeking jobs, their career process, place and region of employment and to what degree is their qualification exploited. The results showed that only 4% of the graduates are unemployed.

Besides results of own inquiries MUAF uses statistical data about the labour market, which the Ministry of Labour regularly issues, also data from the Analysis and Strategy Department of the Ministry of Education and data published by the Department for Information in Education.

In line with the Long-term Project of the Ministry of Education and the University Act, MUAF will draw up and launch a *careers advisory service* applying experiences of the existing *pedagogical and psychological advice office*.

2.6 Evaluation of the infrastructure in relation to the number of students and employees

For 7275 students, 363 teachers and 98 researchers the university provides the technological and information background and corresponding services at a high level.

The material and technical basis of the university, equipment of rooms with educational, audiovisual and other special technology, equipment of laboratories and specialised research teams is at a level corresponding with the European standard; it was achieved by gradual improvement especially in the period after 1989. The technological and apparatus equipment has been gradually improved over the past ten years, the volume amounting to 10-15 million CZK a year.

The Department for Scientific and Pedagogic Information supplies all educational and research departments of the university with *information data and availability of information sources*, in the form of extensive information, retrieval, audiovisual, publishing and library services (book stock: 365,000 titles, 6000 additions a year), launching electronic information sources (on-line database and on-line sources of texts of articles). The Department includes an *Information Centre* with 137 seats, 74 seats for readers, and free access to ca 8000 books (visiting rate in 2004: nearly 190,000 students and academic staff). The Department also runs the internal information system, film library and university video library.

The Department for Information and Communication Technologies (DICT) provides *information and communication technologies*. The backbone of the computer network runs through an optical cable. The computer network has been installed in all the buildings of the university and all workplaces are connected. In 1999 new technologies for high-speed data transmission were launched. The university is connected to the Brno Academic Computer Network, which has ca 2000 PC's. The network of the Faculty of Horticulture in Lednice has structured cabling with more than 100 CN. The network is continuously up-dated; computer sites are launched at the students' residence and relocated workplaces are connected. In terms of the project of European networks MUAF is a member of CESNET, through which the university participates in the GÉANT Pan-European academic network and is directly connected with a number of neighbouring providers, including the American project INTERNET2.

DICT operates the *University Information System*; the operating modules have considerably updated all the areas of university management (student administration, administration of research activities, administration of accounting and personnel management).

The application of information and communication technologies (ICT) is also a standard *component of the educational system* (computer classrooms, enhancement of foreign languages, audiovisual technology as a component of education etc.) The development of the information system has established a very strong instrument for a higher efficiency of activities in all areas (administration, management, education, research).

Relocation arrangement of MUAF: The university premises make up a concentrated complex of 12 buildings of the Faculties of Agronomy, Forestry and Wood-Processing, Economics and Business, including all teaching and scientific-research areas (250 classrooms, 248 laboratories, 1 studio) in Brno, and including the rector's offices, i.e. the academic and economic management of the university together with the economic-administration departments (personnel and economic, board and conference rooms, maintenance department, dining hall); it is the main setting of information structures and technologies (library, study room, reading room, study and information centre, audiovisual centre, publishing department, university textbook shop). Direct access to the botanical garden and arboretum is possible by a bridge across the adjacent road, which the university had built. The equipment of the classrooms and laboratories is above the standard (audiovisual technology, control by own internal TV circuit, equipment of computer and language rooms etc.), the equipment of classrooms in the specialized building (2004) is to a high standard. The students' residence and canteen also make up a concentrated complex (2 localities: 2 buildings, including a gym + 4 blocks of buildings). The Faculty of Horticulture is based in Lednice and Břeclav (60 km from Brno) in order to maintain the historical position in the locality of the Lednice-Valtice area – see above (8 buildings, 18 classrooms, 3 studios, 4 laboratories). The area, is suitable for the implementation and development of study programmes of the faculty, the only ones of its kind in the CR (garden architecture, viticulture and vine-growing). The faculty has its own base of educational, scientific-research, information and technical services. A limited number (3) of satellite or professional stations serve education and research purposes.

For *Development of infrastructure* in terms of modernisation and priorities see 2.4.

2.7 Evaluation of the student/staff ratio

As of 31 December 2004, the enrolment stood at 7275 students; 363 academics (51 professors – 14%, 69 associate professors – 19%, 243 assistance professors – 67% of the staff in total) participate in the educational and scientific-research activities, 98 are researchers, 142 technicians for teaching and research (8.3%). At the present time there are 20 students for one teacher (average of the university), increasing the demands for the professional standard and qualification of the teaching staff, namely considering the flexibility in diversification of study programmes, variability of knowledge and increasing numbers of students. In this respect the methods of financing the university is a limiting factor, which does not allow to increase the number of students to correspond with the same growth in the number of teachers (in the past 10 years the number of students has

increased 100%, the number of teachers 15%). The university deals with this problem by seeking methods of more efficient teaching, e.g. by analyses of performance by means of the UIS database or modification of the organisation of teaching.

III. HOW IS THE UNIVERSITY TRYING TO ACHIEVE ITS AIMS

3.1 Academic activities

In the past five years the development of the University was focused on achieving a high standard of education and research corresponding to the *standard of the European system of higher education*, and on expanding the scope of activities in the area of professional advisory services. In compliance with demands for a system of tertiary education and requirements for the building of a European research space area, MUAF *diversified its educational and research programme, embraced internationalisation and orientated itself to the changing requirements of society*. The university strived to humanise its activities and its share in orienting the students to values stemming from the ideals of a democratic society.

In diversifying the educational programme, MUAF focused firstly on the complete *implementation of three-grade studies*, i.e. bachelor, master and doctoral study programmes; in the second stage on launching *studies presented in English*; and *thirdly* to make the education goals and methods of education clear to the different intellectual level of the applicants.

The components of the graduates' educational activities extended to include *higher mobility and adaptability*, both at a national and international level. This step requires the graduates to be equipped not only with qualified scientific knowledge verified in practice, but also with the capacity to identify and analyse opportunities and threats, to respond quickly and correctly, to accept responsibilities, to be innovative and creative in individual and team work; at the same time to handle information rationally and in a modern way, to be able to communicate effectively, to lead people and have a desire to continue in education and learning.

MUAF launched a system of *evaluation by means of a credit system* for the period of studies and its termination, based on the principles of the European Credit Transfer System (ECTS).

Basic forms of instruction (lectures, training, seminars) were *expanded* to include field training and excursions outside the University, teaching in studios (design studios), multi-media and colloquial instruction and self-study with the aid of materials available on the Internet, elaboration of independent work in the form of designs, case studies (in some courses elaboration of such work is a requirement for termination of the subject). Agricultural, forest and technological study programmes have a higher share of laboratory training and special instruction. The focus on the students' command of languages is very strong (this also includes the academic staff).

For records of studies an electronic form was launched in the University information system.

Within the system of universities of the CR the University fulfilled its mission as a university professionally focused on two groups of programmes: a) a programme focused on sustainable use of natural resources in agriculture and forestry (education of experts for agriculture, horticulture and forestry); b) a programme focused on the business sphere of economics (education of experts for management and business economics, business activities, finance and economic informatics) and interconnection of these two groups and interconnection of university study programmes and study programmes of higher vocational schools of the same or similar orientation (namely horticulture and forestry); this was seen to be an important way of improving the profile of the graduates and research activities, but also a way to advance bachelor study programmes and develop co-operation with higher vocational schools. *Lifelong education and the Third Age University* extended the range of choice of study programmes provided by the University.

When *organising scientific-research activities* the aspiration of MUAF is the optimal compromise between the duty to conduct R&D in all accredited courses of university education and the general trend to focus on only a number of research priorities. The theoretically oriented workplaces pursue *basic, i.e. investigative research*, in co-operation with the institutes of the Czech Academy of Sciences; technologically oriented workplaces pursue *application research* in co-operation with branch and non-governmental research institutes. Co-operation of this kind has a long tradition both in research and education; it has its role, place and quality. For both parties it is very important to preserve and advance such long-term co-operation in order to maintain live contacts with work experience.

MZLU operates its own *internal grant agency*, which is declared as a university body participating in the formation of the University research policy and its priorities, which supports the creative research structure of the University and its activities, encourages the incorporation of students in science and research, funds the advancement of science and research and publishes the results.

MUAF publishes its own scientific and research results in the University's scientific periodical *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis* (6 times a year, ca 200 original scientific papers and communications). The average annual extent of *publication activities of the educational and research staff of MUAF*, as an important attribute of the research process, is: ca 30 monographs, 600 original scientific papers (of which 35% in journals with a higher impact factor), 1100 articles in proceedings from conferences in the CR or abroad (30%), 400 technical works, ca 700 reviews and expert reports. The results of research activities can also be presented by means of *organising scientific conferences* (50-60 a year).

Description of the research infrastructure of MUAF see 2.6.

In 1999-2004 *institutional research* at MUAF expressed as the so-called *research plan*, based on the long-term orientation of research giving preference particularly to its specificity and originality, comprised 6 research units as follows: *Regulation of biological and technological processes for competitive multi-functional agriculture + Regulation of plant growth and development, Molecular embryology – a key to healthy farm animals, Sustainable forest and landscape management, Wood from forests affected by human activities – properties, use and effect on the inhabited environment, Regeneration of monuments of landscape architecture and garden arts, Forming the structure of agriculture and the food industry and competitiveness.*

Research plans brought a number of *important results*, which have already been applied in agriculture, forestry and horticulture; some are further advancing human knowledge in the basic scientific disciplines. For instance, scientists of the unique workplace of supra-national importance the *Laboratory of Molecular Embryology* announced (2004) the finding of several lines of human embryonic stem cells. The immediate scientific value, and especially the potential possibility for future use of technologies based on human embryonic stem cells, which will help to define the character of bio-medicine of the 3rd millennium, is excellent (therapy of Parkinson's and Alzheimer's diseases, degenerative disorders of joints and bones, diabetes, post-trauma damage of the spinal cord etc.).

Another unique research centre, which is very successful not only in the Czech Republic but also abroad, due to extensive international scientific and research co-operation, is the *Institute of Forest Ecology* focused on forest ecosystems in line with sustainable forest management and the function of forests in the landscape. The research centre *Signal paths in plants*, which is a part of the *Research Centre of the Department of Experimental Botany of the Czech Academy of Science* and which is involved in the transport of growth substances, their metabolism and effect of these processes on morphogeny processes and programmed cell death. Explant cultures of spruce and tobacco serve as an experimental system.

Over the six years of the research plans and their annual evaluations, on the basis of which further funds were obtained, a considerably contribution was made to the budget, i.e. 320 million CZK.

Grant research has been conducted at the MUAF since it was launched in the form of the *Czech Grant Agency* (1993) and through other grant agencies of the respective branches in CR; it is established practice at the University now (annual average 250300 grant projects of various kinds) and a routine way how to obtain funds for research activities (ca 90 million CZK a year).

3.1 Activities associated with academic area

Activities of the University in the area of information support of research and education, activities in the area of information technologies and improvement of the material-technological base – see 2.6.

A speciality of the University in the framework of interconnecting research and education is the so-called *special-purpose activities of university estates*. Working experience and training of students is conducted here; they serve research activities in the experimental and verification part and provide advisory services. An important component of special-purpose exploitation is the consistent attendance and co-operation of the teachers in the technological and economic management of the operations which considerably enhances their scientific and educational work. The estates are showcases of the University, both for the professional and lay public. The sense of historical continuity is an important aspect for their maintenance and further development ¶

Activities of the University in the consultancy system (apart from the activities of the MUAF institutes) are conducted through the Consultation and Advisory Centre of the Czech Ministry of Agriculture within the project *Programme for the Promotion of Advisory Service in the Public Interest*. The content of activities is defined as advisory support of the administration of direct payments and measures of the Operation programmes of the European Social Fund *Rural Development and Multifunctional Agriculture and Horizontal Rural Development*. Among other things it involves providing information about the possibility of obtaining funds from the EU Structural Funds and about the optimal use of these funds. The *methods of implementation and extent of advisory services in the region* are also dealt with.

Consultancy, focused in the first place on the requirements of students, is conducted by the *Psychological Advice Bureau*, which is a professional centre of the university (information, go-between activities, diagnosis, individual or group training; and also a relaxation programme).

Accommodation, catering, care of students. MUAF's present available accommodation capacity can accommodate 70% of the students (of all types of studies) and in terms of providing a background for the students and in terms of competitiveness of the university it considerably reinforces the position of the university. Catering capacities for students and employees are sufficient even if the enrolment rate increases. MUAF provides above standard sporting opportunities for the students (physical training courses, summer and winter training in the Czech Republic and abroad, membership in the University Sports Club; our students are also very successful in sports disciplines at the level of European and world championships).

Activities associated with the presentation of the university (public relations) are standard and routine in terms of their methods, elaboration and management (scientific and technical conferences, conferences held on special occasions like anniversaries, standard contact with media, internal and external printing of special-purpose and promotion materials, issuing educational, special-occasion and promotion CDs, DVDs; internal press secretary).

A showcase workplace incorporating educational, research and demonstration components is the *Botanical Garden and Arboretum* with exceptionally rich collections of woody species and taxons of plants in an extremely aesthetic setting.

The abovementioned scientific journal of original scientific works *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis* serves for the presentation of publication activities.

3.2 Finance

Comprehensive economic management of the university is based on the awareness of correlations between the development of educational and research activities, the objectively necessary replacement and stabilisation of the scientific-educational staff and the financial and economic stability of the budget. This is regarded as the only way to create favourable conditions for achievement of the defined long-term objectives of the university. The total average annual budget of the university is 550-600 million CZK, out of which ca 50% is intended for wages.

Rules for drawing up the budget: the basic tool of economic management is the budget; the formation and administration of the budget is primarily based on the following:

- Complete "transparency" of the formation and administration of the budget of the university and faculties based on a methodically constant elaboration of budgetary and analytical information,
- Decentralisation of financial management, decision-making and responsibilities in relation to:
 - the university – faculty and university workplaces, special-purpose facilities and university estates,
 - the faculty – institutes and other departments of the faculty

Specialised division of the budget of the university principally involves:

- Staff costs, including:
 - wages,
 - social and health insurance,
 - accident insurance.
- Other non-investment costs of university parts, including
- PhD scholarships.
- Other estimated non-investment costs, including:
 - depreciation,
 - costs of international contacts,
 - a contribution for special-purpose activities of the university estates,
 - a contribution for international students,
 - accident fund,
 - reserve.
- Investment

The budget of the students' residences and canteens and university estates form a separate component of the budget.

Budgeting non-investment costs is based primarily on the following *principles*:

- Division of budgetary sources into non-investment costs of parts of the university based on the number of students who have basic grants from the state budget and based on the average costs for students of the respective study programmes.
- Division of costs for all-university purposes covered by faculties according to normative sources.
- Considering inter-faculty interconnection of teaching.

- Distribution of costs to all-university units based on their share in the teaching performance
- Division of PhD scholarships.
- Division of the amount for advancement of research according to defined criteria.

All-university and similar costs include:

- Costs of Rector's Office divided into:
 - university management
 - scientific-educational services
 - technical services.
- Management of buildings in Lednice.
- Other expenses.

The available *sources for financing investment* come from an allocated system allowance from the state budget and sources of reproduction of fixed assets (FRIM) within the investment budget and are divided into:

- university-financed building investment,
- investments in machines, instruments and other fixed assets for use by the whole university,
- financing non-building investments of faculties and their workplaces,
- reserve in the fund for replacement of fixed assets carried forward to the next year.

Within the control of *funds obtained from grants and from profits of other activities* the ratio of overhead costs to direct costs is specified every year and the sources corresponding to the settlement of overhead costs for the benefit of all-university sources and faculty sources are divided.

Development of *investments at the University* included in recent years the building of laboratories and special classrooms for the new study programmes (wood engineering, operation of technology and food technology) completion of the University Study and Information Centre and – last but not least - construction of the new multi- functional pavilion Q for the substantially expanded Faculty of Business Economics and its economic degree programmes.

Reconstruction of the existing buildings pursued their modernisation and relocation of departments and other units. In addition to the necessary restructuring and modernisation of buildings the improvement of accommodation in the students' residences is ongoing. Construction of new buildings improving conditions for teaching and research activities and facilities of students' residences is planned for the nearest future at the same time create with gradual liquidation of a number of temporary and aged buildings.

Development of infrastructure

MUAF will achieve the necessary development of infrastructure under the condition of adequate raising of non-investment state budget resources, especially by

- increasing the amount of so-called normative contribution from the state budget (paid per student head) by a potential increase in the number of students,
- saving and/or increasing the amount of financial resources for the so-called specific research of universities (depending on the amount of funds obtained from grants, number of associate professors, ordinary professors and number of doctoral students graduated successfully),
- gradual increase of incomes coming from supplemental activities of the University (entrepreneurial etc.),
- extending the quotes for investments by increasing subsidies from state budget for investments so that the average annual volume of these resources would allow the necessary reproduction and/or modernisation of fixed assets.

The above raised funds are used primarily for

- improving the financial conditions for attracting and keeping young researchers and academics,
- financing the modernisation and maintenance of fixed assets at the University,
- stabilization of the University budget and financial system by creating financial reserves.

Resources for *research and development* are distributed similarly. However, the origin of these resources is different. Funding the R&D of the University from public funds is ruled by the R&D Financing Act (2002) and is carried out in two forms:

purpose-fixed financing, i.e. funding of research projects, programme projects, projects for state administration – all funds obtained come from public grant competitions

institutional financing, i.e. funding of R&D on University as a research institution established to this purpose by law.

The university is provided the *institutional funds for specific research activities* in the form of grants, the purpose of which is to encourage and support R&D activities, which are inseparably connected with education – with accredited study programmes.

All subsidies of research and support of grant projects for 2004 amount to 185 million CZK (391 projects and grants). They represent ca. 30 % of the total budget of the University.

3.4 Analysis of strengths and weaknesses and proposed action plan to remove the weaknesses and to highlight the strengths

The analysis of the strengths and weaknesses in educational, research and management activities of the university is carried out *implicitly*, as part of the monthly *analytically structured reports on the activities* of faculties and the University as the agenda of Dean's and Rector's councils and *subject-oriented programme of quarterly-held scientific boards of faculties and universities*.

As the strengths of MUAF can be pointed:

- a) At a general level of the conception, management and organisation
 - Efficient economic management
 - flexibility of the University in the use of new opportunities in academic activities and in reducing threats from the external or competitive environment.
 - Focused efforts to achieve European standards and internationalisation of the University, especially in education, research and mobility of students and academic staff
 - permanent improvement of the infrastructure (including a marked extension of room for teaching and research), information and communication technologies, particularly development and launching of the University Information System (in the area of economics, education, research), very good accommodation for students and student care, including an advisory service and modern technology in the publishing service (textbooks, publications, proceedings, special-occasion prints)
 - well-established contacts with external partners, local and regional administration
- b) in education particularly:
 - increased demand for studies at MUAF and considerably higher numbers of students achieved through re-structuring
 - extending study opportunities through lifelong education (including the Third Age University)
 - uniform study and examination rules
 - three-grade model of studies at all faculties
 - introduction of the semester as the basic unit of studies and evaluation of studies by means of credits
 - issuing the *Diploma supplement*
- c) in research particularly:
 - strong tradition of university research
 - success of researchers in obtaining grants for research activities (within the framework of Czech universities) and substantial increase in funds for research from this source
 - establishing a number of unique research workplaces (Laboratory of Molecular Embryology, Signal Paths in Plants, Institute of Forest Ecology) and special workplaces (department of nuclear methods, gene bank, department of chemistry and biochemistry)
 - continuous introduction of research results into education
 - reinforcement and use of the scientific potential of the young generation
 - reinforcement of inter-departmental team research co-operation and inter-branch solution of research topics
 -

The following objectives will help to highlight the strengths:

- intensifying the University's flexibility by monitoring trends in relevant spheres of interest
- strengthen the established connections with external partners, in particular the local and regional administrations, demonstrating the University's flexibility
- accreditation and teaching selected study programmes in English (for a higher student mobility)
- to make the best use of the University Information System as a competitive advantage in the offer of study options
- offering ECTS as a tool for closer connection with the study programmes of universities abroad to increase bilateral student mobility
- motivate of young researches to stay at the University after they graduating their PhD studies
- further innovations of study plans through closer research and education interconnection
- more publications in scientific journals with high impact factor abroad
- motivate successful researchers to work in work in European research team programmes

As weaknesses we consider the following:

- insufficient changes in study plans after acceptance and implementation of three-grade studies

- the profile of bachelor graduate is not finished (must be prepared for a career in practice)
- adequacy of human resources in education: the high-age category of associate professors and professors is a continuing problem
- slow introduction of new methods and forms of studies (e-learning, distance education)
- unbalanced research activities within faculties and departments
- participation in European programmes is not satisfactory (a problem of most universities in CR)
- very high dependence of university research activities on state funding
- non-system career education of senior executives on all levels of management

Action plan to eliminate the weaknesses:

- intensify the implementation of efficient re-structuring of study programmes at faculties by means of the University *Principles for setting up study programmes* (until re-accreditation of programmes 2005/2006) and functioning of the *MUAF Accreditation Committee*
- elaborate and implement “university – inter-faculty” study programmes
- finish the changes in study plans in the profiles of the bachelor and engineer graduate (including modified professional guarantee by academic staff)
- stimulate the introduction of new methods and forms of study (presentations, experience, interactive courses and seminars)
- stimulate the young academic staff towards purposeful qualification progress (system and non-system)
- amend the MUAF research policy adding motivating and stimulating elements to balance research
- provide information about the EU Framework Programmes in research (system) (???) to improve overall information
- support the funding of research from the business and/or private sphere by initiatives in the area of “clusters” (a problem of most universities in CR)
- incorporate career education of senior executives of all grades into the structure of management of MUAF (system: career advisory bureau, non-system: individual plans for personal career progress)

3.5 Activities of the University and faculty managements (legal entity: university)

The Act on Universities (1998) defines the formal aspect of organisation and management of the university and faculties .

In the area of organisation and management MUAF maintains a system of faculties; i.e. the Faculty of Agronomy, the Faculty of Forestry and Wood Technology, the Faculty of Economics and Business and the Rector’s Office. Within this arrangement the efficient management of the University is concentrated on decision-making about important issues of university development at the level of the rector and university bodies of academic self-administration (Senate, scientific council, disciplinary committee). In terms of the MUAF Statute this particularly concerns the management of:

- Crucial issues of the qualification structure of the teaching staff,
- Administration of buildings and other facilities, investment construction aimed at the reconstruction and development of this component of the fixed assets of the University,
- University workplaces of scientific-educational services (including lifelong education and language culture), information services and technologies,
- Special-purpose facilities of the University and university estates,
- Financial management based on the principles of drawing up and administering the University budget.
- *Internal regulations of the University* consist of the following: statute, electoral regulations and rules of procedure of the Senate and Scientific Council of the University, wage regulations, study and examination rules, scholarship rules, disciplinary rules.

Binding documents of the University consist of the following: Long-term plan of MUAF, Up-date of the Long-term plan of MUAF, Criteria for assessing scientific and educational qualification of applicants for associate professor or professor degrees, Regulations for awarding *honoris causa* doctor degrees, Regulations for selection procedure, Recommended principles for concluding employment relationships of the academic staff, Rules for joint research with students, Rules for exploiting funds for R&D, Regulations on the internal control system, MUAF International Policy Statement, contracts in education or research concluded with institutions in the CR or in foreign countries.

The *Academic Senate* makes decisions on proposals submitted by the Rector concerning the internal structure of the University; it also approves the members of the Scientific Council and disciplinary commission, internally approves the University budget, annual Activity report and Long-term plan, confirms the appointment of vice-

rectors, takes notice of legal acts, which require the consent of the administrative board, on suggestions and proposals of the Administrative board.

The Administrative board (Boards of Trustees) issues written consent on legal matters regarding property and comments on the long-term plan, budget and annual activity report. It initiates suggestions and expresses opinions on university's activities.

The advisory boards of the rector are the Academic Board Rector's Collegium (rector, vice-rectors, deans, registrar) and the Deans Panel. The registrar (responsible for faculty secretaries, managers of university workplaces and special-purpose facilities) manages the University committee for economic-administration activities.

These bodies meet on a regular basis according to a published calendar. Their specific tasks are clearly defined and their fulfilment is controlled in terms of accuracy, effectiveness and impact. The conclusions are binding or recommended *ad hoc*

For the management of university activities the rector appoints *vice-rectors* (for education and informatics, for scientific and research activities and public relations and for the operation of university estates).

The management of the University pursues the *professionalism of the managing personnel* in terms of the principles of management and its methods, also in terms of qualification (optimal number of trained managers) at the level of present academic positions and also in the area of managers of the economic-administration sphere, and/or key positions of administration staff. Elaboration of the conception of development in this area will be one of the topical aspects of the updated Long-term Plan of MUAF for the coming period.

The faculty arrangement of the University involves the existence of similar organisations and managing structures at faculty level (dean, vice-deans, departments, senate, scientific council, dean's collegium) maintaining the central conception and need for a strong position of the central management as mentioned above. An important component of efficient *co-ordination of activities of faculties* is to maintain rational inter-faculty interaction in education. Part of the study programme of the University is multi-disciplinary and in order to optimise inter-faculty interaction and to prevent duplication of the professional bearing of the University's workplaces, joint workplaces have been established and cross-university research teams set up. This may eventually culminate in the merging of departments.

Bringing students into the organisation and management of the University and faculties in the form of equal membership in the academic senate of the University and faculties (one third of the number in accordance with the Act on Universities). Participation of students in activities of the University and faculties, or influencing these activities at a general or qualitative level, is achieved by their involvement in the programme committees of all study programmes, in the programme councils of faculties, the disciplinary committee and the students' residence council.

Adequacy of human resources and framework programme of development of the workforce: as stated earlier, in terms of the number of persons active in educational and scientific-research activities, for 7275 students stand 363 teachers (thereof 51 professors – 14%, 69 associate professors - 19%, 243 assistant professors – 67%) and 98 researchers. This makes the ratio of 20 student/1 academic person which may be considered to be within the optimal limit.

In terms of quality, i.e. qualifications of the academic staff, experience and erudition of scientists and researchers, MUAF is above standard (international valuation of research, accreditation for teaching by experts from CR and abroad, very good success rate of students in the job market). The management of the University tries to achieve the optimal structure involvement of the respective categories of academic staff in education based on the educational and scientific degrees in the structure professor-associate professor-assistant professor. When drawing up the Long-term Plan of MUAF in 1999 (when the situation was: 385 teachers; 38 professors, 96 associate professors, 51 assistant professors) it was recommended to optimise the ratio of 1 : 2.5 : 6.2 before the end of 2004 to a ratio of 1 : 2 : 4.5 (the longer-term optimal situation is considered to be the ratio of 1 : 2 : 3). The present situation, i.e. 1 : 1.4 : 4.8 approaches these generally formulated *principles of career progress*. The *age structure* of the teaching staff is still unfavourable; high average age is seen in the categories of associate professor and professor.

3.6 How education and research carry out the University's mission

The basic function of all spheres of university life described in this evaluation report, is to fulfil the mission of the University as a public school of university type, a supreme centre of culture, independent learning and creative activities.

For MUAF it means *developing a modern structure of subjects*, to furnish the students with solid rudiments of the values of the past, and at the same time with the most up-to-date information. The university has also increased the demand for the education of teachers particularly with their ability merge the European cultural tradition and the latest developments in scientific learning and progressive practice. The university's aspiration is to be the centre of creative ambitions – to develop and cultivate research and expertise.

Introduction of a new structure of study programmes was not enough. It was also seen significant to adopt *new methods and a new style of teaching*, which would prove to be more intensive and efficient, which would convey more information in a shorter period of time, at the same time cultivating in the students an entrepreneurial drive, i.e. the greater part of own studies; studies made richer by more information (in the form of both books and the Internet), adopting more attitudes, more solutions of problems, more projects of greater importance, which would help to check the interconnected knowledge.

The orientation of the research programme enabled the University to respond flexibly to the latest information and trends in disciplines of research, taught and developed at the University and also to changes in the understanding of the function of agriculture in a sustainable development of the society. The mission and goals of the University (see 1.2/A) make university research a full-value *member of the scientific-research system of CR*, particularly in terms of the character and content of the research activities (see 3.4.) and its priorities (see 1.3), through research activities of the staff as full-value elements of the *scientific community of the CR*, through its position as a research institution, which takes part in the *creation and fulfilment of agricultural, forestry and economic policy of the society*, and finally through creative activities at the level of basic (theoretical) research it contributes to the *advancement of theoretical knowledge in the scientific disciplines* and in this way to the *advancement of general culture*.

IV MONITORING THE QUALITY AND ITS RATING

4.1 Sharing duties and responsibilities for monitoring the quality of activities of the University

Duties and responsibilities for detecting the quality of teaching and research are shared, assured and specified by the *structure of management*: department–faculty–university at the level of their heads (head of the department, vice-dean for research/education, dean, vice-rector in charge of research/education, rector); for the implementation of educational and research activities in this, or methodical, position they are:

- responsible, they manage these activities
- and through their boards they evaluated the results of these activities in the area of conception, methods, content and standards, results and their impacts and further development of the activities and qualification advancement of the staff (committee for education/research of the faculty/university-collegium of the dean/rector-scientific council of the faculty/university-rector + senates).

The *heads or methodical staff* at various levels *elaborate evaluation reports for the respective areas* according to their purpose or orientation, or it is done by individuals within the framework of *self-valuation reports*. The periodicity, frequency and regularity of the reports depends on their purpose: Evaluation reports intended for and demanded by the Accreditation Commission of CR for Accreditation of branches of study, habilitation branches and branches for naming professors according of the length of the granted accreditation; Annual evaluation report on the activities of the University; Evaluation and updating of the Long-term plan of MUAF for the Ministry of Education annually; Evaluation reports on partial activities of the University/faculty/department for scientific councils, deans' and rector's collegia 1x–2x a year. Other evaluation initiators are e.g. other ministries, for the University it is namely the Ministry of Agriculture, in the area of research the Council of the Government of CR for research (evaluation of publication activities by means of data collection for the Register of Information about Research Results). The frequency and method of evaluations is routine and is elaborated on a yearly basis.

Quality rating is *a component of the system of internal and external rating*. The *objective* is to increase the level of education, successful scientific and creative activities and their competitiveness in the domestic and international environment, optimal qualification of the staff and its growth, quality of management and also monitoring the opinions of the students, graduates or external subjects of local, regional and/or potential employers of students on the quality of education and research at the University. For the above reasons, rating the quality of education, research and other activities of MUAF is necessary and is one *priority of its interest*.

4.2 Is quality monitoring based on explicit standards of quality? Are these quality standards generally familiar and accepted at the University? Is there a common quality culture?

Explicit standards of quality rating are well known at the University and accepted due to their liability for education and research where the two categories differ in the method of rating. The importance of rating the basic activities of the University (education and research) emphasising the quality is growing along with the general demand associated with the amount of generated information (namely in research) and is stimulated particularly by the limited dispensable funds and increasing responsibility for economical management of the funds. Increased demands of the society for the accountability of research and its quality as well as the quality of education, for requirements and objectives, in the area of research especially for its contributions and utility form the concepts of *intellectual relevance*, which the educational and research community itself defines, in research it is also the *social relevance*, which is estimated particularly by extra-scientific users.

Evaluation of activities and their quality is an important instrument for the formation of the educational and research policy of the University and for the control of its implementation. In the process of forming the policy we distinguish *summation* evaluation (evaluation of the results) and *formative* evaluation (focused more on the process of improvement and learning, on the so-called feedback between the valuator and evaluated; indicated also as *coaching*). In the CR, therefore also at the MUAF, for the time being *summation evaluation* prevails. In the EU the decisive criterion in the area of research, applied for universities especially through the Ministry of Education and the Czech Governmental Council for research, has lately been the *orientation of research to innovations*, and/or contribution to the creation of innovations. Increased attention is devoted to monitoring *the evaluation of the used instruments of the support*. Such methods and systems of evaluation are enforced, which enable to find the quality and to separate it from the average. This includes the so-called *benchmarking*, which measures own evaluated performances and processes with external performance. The importance of methods of the *technology assessment* or *foresight*, which have the character of a participating process employing various interested subjects (stakeholders) from research, industry, finance, state administration etc. is growing. A clear trend is *emphasising the practical application of the results*. The compliance is that further development of methodology and standards of evaluation is not only necessary but also inevitable.

4.3 How adequate are the sources for the support of internal quality control, framework programme of the development of manpower?

No special autonomous subject or source of funds has been established at the University to support internal quality control. The source of the Ministry of Education, the Developmental Programmes of Universities is used for extensive evaluations of the implemented type. Long-term Plan of MUAF (1999) defined the Framework Programme for the Development of Manpower. Its description see 3.6 – adequacy of human resources.

4.4 The mechanisms used to monitor the quality in terms of educational activities

To monitor the quality of educational activities MUAF uses the evaluated conclusions of the *structured evaluating reports* of the faculties, which in a similar way use the reports of the respective departments (made up, among others, by summarisation of annual self-evaluating reports of the academic staff for the educational and scientific-research area). The evaluating report on educational activities of the University, incl. evaluation of their quality, is the subject of discussions of scientific councils of all faculties and of the University and programme councils at faculties with the participation of students.

The quality of educational activities of the University is also monitored using the *system of feedback*, in relation to *students* (opinions on the graduated subject, annual questionnaire inquiry, investigations of graduates in three-year cycles, occasional investigations of employees and their annual self-valuation reports) and in relation to *employers* (occasional investigations, e.g. opinions of the firms on the application of the graduates and their incorporation into social practice).

4.5 The mechanisms used to monitor the quality in terms of research activities

In terms of research activities MUAF applies adequate mechanisms to monitor the quality described under 4.2, currently especially in association with the *Methods for evaluating R&D and their results* elaborated by the Governmental Council of the CR for research together with the Ministry of Education, which are presently ensuring joint *quality culture*. The objective is to evaluate the efficiency of institutions and the quality of the results in linkage to expenditure from the state budget. The national database of publications the *Register of information on the results*, which we supply with data on the results, is used as the source for evaluations. For the *quality of results* we consider publishing in journals with different impact factors, technical articles, articles in reviewed non-IF journals and applied outputs. Due to the fact that the *results are reflected in the proposals for university subsidies* (in the area of so-called specific research), the methods also guarantee *general methods of evaluations*, such as regularity and repeatability of the evaluations (input, continuous and final), preceding the definition of the concrete objective, which should be achieved at a given time and about which a decision can be made whether and how the objective was fulfilled; that means fulfilment of the demand that the criteria are

known in advance and are binding, clearly formulated, quantifiable, measurable, rateable and related to the objective.

The MUAF Scientific Council and the MUAF Administration Council conduct *Internal rating of the quality of research activities* on a regular basis, where namely the professional level is evaluated, accordance with the conception of faculties, world trends in the branches and other indicators required for maintaining contacts with the wider international scientific and research community. The evaluations also apply to whether

- *the planned objectives* for the given year were fulfilled and
- how were *the new results presented*, namely the *publication activity associated with research results*,
- how the other mission of research projects, such as *enhancement of creative activities of pre-graduate and post-graduate students*, is fulfilled
- how the *inter-departmental co-operation, co-operation with the scientific community abroad* is boosted
- how the *motivations of young prospective workers* are boosted by providing access to sources of research projects (not only part-time jobs, possibility to attend study stays abroad, participation in conferences and symposia, and also providing the same rights to obtain a financial bonus for publication activities as regular employees).

An indication of the standard of the projects is activity at congresses, seminars and other similar events in CR and abroad, the interest of international partners in participation in research projects and the demands of state administration, of agriculture, forestry and the economic sphere for expert and advisory activities.

External rating of research is the subject of opponent proceedings of grant agencies in CR and abroad. The rules are defined when the selection procedure is put up and differs according to the providers, laying emphasis namely on the *published results and results implemented in practice*.

MUAF regularly *provides data* as an indicator of R&D for the Czech Statistics Office. These data fully respect the principles of EU and OECD (measuring human and financial resources related to research and developmental activities).

4.6 What mechanisms monitoring the quality are used in terms of the results of students including the analysis of the failing rate and actual length of studies

In 1999 the MUAF Long-term Plan determined the demand to focus explicitly on the *analysis of causes of failure*, particularly of first-year students and study programmes where 20–40% of the students fail to pass the first year, and to work out corrective actions. That is why the results of studies, including analyses of failure and length of studies, are the subject of annual analytical analyses submitted to the scientific councils of faculties and the University. The analysis, based of the type of studies, contains the duties required for advancing to the next semester, the number of obtained credits (average 40-60 for one academic year), fulfilling the conditions to terminate the subjects (including the students' subjective division of subjects into groups presenting minimal and maximal demands).

The evaluation of study success is a direct document for the Ministry of Education for *specifying the budget subsidy for MUAF based on the number of students*.

4.7 The mechanisms used for monitoring the quality in terms of administrative procedures

Monitoring the quality of administrative procedures at the MUAF *enables to ensure pragmatic, correct, economic, efficient and effective use of public funds* in the extent of authorities of employees and responsibility defined by labour-law regulations, internal regulations according to the University act and other internal university regulations and generally binding legal regulations of the CR. Quality control is based on the *law on financial control in public administration* (2001), and internal *Directive on the internal control system* (2003).

The structure is divided into *the internal control system* implemented by senior executives, control department, *internal audit* implemented by an employee whose function is separated from managing and executive activities and *external audit* implemented by external subjects.

Top executives enforce quality control in accordance with their authority and responsibility; they execute routine, special, financial etc. audits applying *permit, operation, evaluation and auditing procedures*.

Control of the internal audit department detects the actual situation of the controlled section, deviations from the desirable situation specified by the legal or other normative regulations and the negative consequences of any deviations are specified.

All top executives are obliged to offer co-operation in financial and other audits conducted by external bodies under law.

4.8 What mechanisms are used to monitor the quality in terms of external relations (local, regional, national and international)

Mechanisms regulating the quality of university activities through relationships with local, regional, national and international subjects are specified by *the contacts with such subjects* at the level of co-operation, membership, methodical control by such subjects etc., general sharing of standards or *the need for special identification of ad hoc opinions as to this quality* (various form of survey) or *strategic plan of some of the subjects* (e.g. in the area of establishment and formation of so-called clusters).

The used mechanisms are either *spontaneous, i.e. feedback* in terms of activities, which are the main mission of the University (educational activities, scientific-research activities, international relations), or *purposefully elaborated* (e.g. investigations into the application of graduates in practice, students' assessment of teachers and teaching etc.):

- a) spontaneous mechanisms of quality monitoring in terms of external relations:
 - number of accredited study programmes (or branches) for all grades of studies
 - number of accredited for habilitation and professor procedures
 - number of associate professors and appointed professors from the members of the academic community of the University
 - number of external applicants who succeeded in habilitation procedures and procedures for professor appointment
 - number of accepted projects and orders within the grant agencies of the CR, EU programmes and other international programmes
 - number of acquired research plans and research centres

- b) targeted, i.e. purposefully elaborated mechanisms of quality monitoring in term of external relations:
 - investigations into the application of graduates in practice, incl. their education
 - students assessment of teachers and teaching within UIS
 - discussions and discussion forum within UIS.

V HOW DOES THE UNIVERSITY KNOW THAT IT WORKS? – QUALITY CONTROL OF THE BASIC ACTIVITIES OF THE UNIVERSITY

The quality of basic activities of the University (educational, scientific-research, non-academic activities, organisation and management) is provided by all joint creators of these processes; the demand to share this responsibility for the quality is considered to be an ethic standard in the academic environment. The university's management ensures the quality of the entire university. The tool helping to preserve the quality is permanent monitoring, evaluations, control and interpretation of the effects of the control (impact) and their application in the managerial process.

5.1 Quality control and its impact

Quality control is based on the system described ad 5.2. Quality control helps to unveil the weak, or crucial points in the educational and scientific-research process, their control and university control. They are solved, evaluated and used for their improvement and/or a different method of further operation is selected. The degree of obligation of following measures is specified.

5.1 Quality control

The system of quality control is assured by specifying partial procedures of this process in order that:

- Quality is defined, i.e. the standard of education and research is defined by the mission of MUAF (see 1), specifying the targets, specifying the priorities (see 1.3),
- The quality of "competition" is permanently followed, so that the University is aware of the standards and level of activities compared to other similar educational or research institutions in the CR or abroad,
- Estimates and sources are given to assure that the quality of teaching, education and research will be preserved; permanent monitoring (see 4) will help to diagnose the strengths and weaknesses of these processes,
- Crucial points are controlled in order to be solved and eliminated.

Information, experiences and results of the monitoring are applied for further advancement of the educational and scientific-research process and associated activities (economic assurance, infrastructure, care of employees and students, facilitating their personal, qualification and further

5.2 Quality control

The system of quality control is assured by specifying partial procedures of this process in order that:

- Quality is defined, i.e. the standard of education and research is defined by their mission (see 1), specifying the targets, specifying the priorities (see 1.3),
- The quality of “competition” is permanently followed, so that the University is aware of the standards and level of activities compared to other similar educational or research institutions in the CR or abroad,
- Assumptions and sources are given to assure that the quality of teaching, education and research will be preserved; permanent monitoring (see 4) will help to diagnose the strengths and weaknesses of these processes,
- Crucial points are controlled in order to solve them and eliminate them and
- Information, experiences and results of the monitoring are applied for further advancement of the educational and scientific-research process and associated activities (economic assurance, infrastructure, care of employees and students, facilitating their personal, qualification and further career education); in this way ensuring the advancement of the entire university.

If procedures of this process are fully functional then quality management becomes *a full-value partial system of the University’s management*.

The opportunity to use information sources, improving the necessary information on the development of European education and research standards, competent linkage with the region and with external partners of local and regional administration (this network is programme-generated), ensure and support the *management of knowledge*. A high-quality information network has been launched to disseminate regional, national and international information transmission using comparisons with the best examples from other institutes (benchmarking). A system of written documents, such as Rector’s Decisions, Directives for Conducting Partial Administrative and Academic and Research Activities, operative circulars, university information e-system and the so-called official folders, guarantee the optimal transmission of information in the managerial process; in this way the optimal flow of information about communication practices and their bonds is ensured and the *internal university communication code* is established.

5.3 Problems associated with quality control

They are internal: i.e. organisation structures, decentralisation of powers and degree of obligation of the following measures with regard to the last step in the quality control system – drawing conclusions and implementing the measures. Optimal interconnection between faculties strengthening central control appears to be necessary.

In terms of quality control there are no problems with mechanisms already working, but they appear in areas where quality control is poor or none at all. For example: although students questionnaires are a tool used for control from below, horizontal control is *de facto* non-existent, i.e. from colleagues of the same department or other institute. In many cases it means that there is no conformity among standards (whether teaching as such or content of the subject) in certain subjects taught by several teachers within one department, at a number of departments of the same faculty or more faculties. It is the same if we take the quality of study programmes as a whole: the standards, no doubt, differ quite a lot. Neither is it easy to judge how the standards of one department or faculty correspond with similar standards at other universities. Even though under the law it is necessary to have one external member in the committee for final state examinations, it is frequently a mere formality and external members assess the examination only in some cases. That is to say that there is no inter-university set of standards evaluating the quality of teaching. And if the quality of the study programme is to be assessed also on the basis of the preparation of students for their future career, we have no feedback mechanism from their employers, telling us how the students were prepared in the past or what are the realistic demands of the market, both of which could be used to propose changes.

It is also difficult to specify the actual mechanism of quality control of managerial and administrative procedures (their correctness and functionality is verified rather than the quality).

5.4 Rating conducted by external bodies, the binding force of their recommendations

The external assessors of education and research are the Ministry of Education, the Accreditation Committee of this Ministry, and/or *ad hoc* branch ministries. The binding effect of their attitudes differs owing to the evaluated area; generally they are binding.

The Council of the Czech Government for R&D assesses research activities only, either directly or through the Ministry of Education; the conclusions are again binding.

The standard of the grant research projects is assessed at the level of fund providers, i.e. Czech branch ministries and the Grant Agency of the CR. Their recommendations are binding. The rating of research projects conducted by lecturers from abroad, which are demanded if required or according to the rules of the selective procedure, are more or less commendatory.

Specific assessors are assessors from abroad, e.g. of the currently performed evaluation of the University.

VI HOW IS THE UNIVERSITY CHANGING? TO IMPROVE? - STRATEGIC MANAGEMENT

6.1 University flexibility in terms of demands, threats and opportunities from the external environment

The principal challenges for the University were all changes in the economic and social sphere in the CR after 1989. The primary answer to external pressure and the search for an optimal way of continuing in the mission of the University educational and research institution under fundamental social and economic changes was *a completely new definition of the profile of the graduate, the agricultural engineer*. The following strategies therefore unwounded in a sequence of strategic decisions of the University management: *re-structuring the University* (namely economic and agronomic branches) – *re-qualification of human resources* (academic staff of these branches) – *diversification of education* (new content of study programmes and branches) – *diversification of education methods and forms*. The two latter stages are being implemented currently to the present time.

Since 1995 the University management has pursued detailed monitoring and implementation of the phenomenon of *internationalisation of the University*.

The accession of the Czech Republic to the SOCRATES programme in 1997 resulted in principal changes at MUAF in the forms of co-operation with EU universities (it was not aid, but co-operation). In 2000 the SOCRATES programme entered the second stage and MUAF now participates substantially in the programme for higher education – ERASMUS. MUAF knows how to use the offered grants and also knows how to use the funds, the so-called supplementary funding via the Ministry of Education. It is gratifying to know that the EU deems both students and teachers of MUAF as equal partners who are interested in co-operation, who fulfil their duties and who manage to use the programme for further improvement of education. The extent of these activities in the academic year 2004/2005, e.g. within the SOCRATES-ERASMUS programme, was 82 bilateral agreements, on their basis 135 study stays of our students are carried out, 60 study stays of teachers at universities in foreign countries and 52 study stays of international students at MUAF.

The European dimension of education at the MUAF was extended *in the area of transformation of study programmes, attitudes of the university management and achieved results in the period of transition to the Bologna structure of study programmes*, i.e. three-grade – bachelor-master-doctor studies. Teaching in English at the MUAF has considerably increased the demands of students from abroad to study at our university.

Getting familiar with the content of the *Memorandum on lifelong study* (EK, 2000) helped MUAF as a starting point for supporting and developing lifelong learning and identification with the principle that lifelong learning is a component of the development of the society based on knowledge, that it is not only an aspect of education, but a principle for providing and participating in education in all respects.

Availing of the opportunity to incorporate the University into *EU research programmes* is not yet at the level and extent of educational programmes (and could not be expected to be). Nonetheless our teaching and scientific staff already have partial but important experiences in this area too; for instance the *Institute for Forest Ecology*, which for a long time has been the workplace of a number of national and international projects.

Using these opportunities to expand the European dimension of the University in association with possibilities offered by optimal internationalisation allows MUAF also to *increase its competitiveness with regard to Czech universities* and, in particular, faculties of similar bearing and in this way to eliminate the potential “threat” of lagging behind on the national average.

The university has made use of the full-value partnership with regional universities with which they are grouped in the *Brno Centre of European Studies*, has joined the information and counselling centres in the South-Moravian Region and City of Brno and in this way participates not only in the local and regional activities, but in the framework of the *South-Moravian Information Centre* and the *Brno Innovation Centre* seeks to enhance in a creative way the co-operation, e.g. in the area of so-called clusters, new initiatives in the regional advancement of innovations (European social fund: Operation Programme of Industry and Trade). MUAF is well aware of the fact that stimulating the formation of clusters in the region should be carried out under the participation of the University as a catalyser of the process. In conditions of the South-Moravian Region such an opportunity is seen in the very realistic projects in Viticulture and Biotechnologies as these branches have a long background at the University as well as scientific and research qualification and in viticulture, due to the majority intellectual share in the Czech Republic, even a moral duty.

A good example of using the opportunity from the external environment is the erection of the new multi-purpose pavilion Q. MUAF succeeded in winning a subsidy for this purpose from the Ministry of Education, which was used in 2002-2004 to build a complex of four buildings indicated as pavilion Q. The building provides 3 amply proportioned rooms, 25 seminar classrooms, laboratories, offices and study room to advance and improve education at the University. The University now has 6000 places for teaching 7275 students.

6.2 Engagement of representatives of the external environment in strategic management of the University

The participation of representatives from the external environment in the strategic management of MUAF is anchored in the act on universities and is practised in the form of participation of representatives of the regional self-government and state administration and public life in the *MUAF Administration Council*, and membership of prominent representatives of branches where the University carries out educational and research activities in the *MUAF Scientific Council*. Attendance in these bodies offers the opportunity to extend co-ordination of the basic activities performed by the University and to involve opinions and attitudes from the external environment, from a different social view. They are acknowledged, valuable and preserved contacts with academic milieu of other universities, scientific-research base in the branches of activities of MUAF and with potential employers of MUAF graduates (scientific council); in terms of implementation and active participation in strategic management of the University the membership is more or less formal; in the case of the administration council it is restricted to approving the decisions and measures of the University namely in property issues.

6.3 Changes in the area of the University's objectives

The basic objectives of the University, its mission, are based on historical tradition, on the general perception of the role of universities in the society, and they are a component of Czech higher education defined at the level of the University Act. These objectives do not change. What does change are the instruments, forms and tools, used to fulfil the basic objectives and mission of the University. Any further changes in this process will always be the result of the work of the management of the University and of its flexibility. For principal changes in this area of a conceptual and strategic character see 6.1.

6.4 Changes in the development of the University that the University can be expected to carry out

Elaboration of the self-evaluation report outlined by the evaluation team of the European University Association (EUA) within the *International Programme for Quality Rating of EUA Institutions* considerably helped the MUAF management to be prepared for changes, which the University intended to carry out, to define the priorities of such changes defining the strengths and weaknesses of the various areas of university life, to find better practice in strategic thinking and to advance towards the common standards of the quality of culture of university institutions in Europe, all this more efficiently and in better quality

In the further development of education, research and advancement at the University we can expect changes associated particularly with the following:

own process of creating a new conception declaring the principles in education and research specified in the *Long-term Plan of the University after 2005 until 2010* (namely in the area of further diversification of studies, applying new forms and methods of education and seeking new sources to fund the University); this should be based on conclusions of the ongoing evaluation process of the University.

consequences of accession to EU; other important materials of the EC and its recommendations will be implemented in the programme of development of the University, particularly in association with the constitution of the European educational and research space (intensifying the internationalisation process of the University),

the general shift in information in the respective scientific disciplines of agriculture, forestry, biology, food industry, veterinary medicine, economics and economy.

It is necessary to focus on the *development of human resources*. Renewal and improvement of career progress of the teaching staff, in terms of both age and qualification, is a strategic condition for a successful perspective of the University.

In the area of the relationships of MUAF with external partners, local and regional administration and external supra-regional, national and international partners, we envisage:

increase of the share of academic staff in professional commissions at a regional, national and international level, which are associated with the professional issues of MUAF,

a keener perception of the relationships between the University and external subjects as an expression of a flexible adaptation of MUAF to the requirements of practice and social orders,

in relationship with external subjects to respect the role of graduates in practice; if we are to develop co-operation it is necessary to know the opinions of graduates on their education and application,

increase in the share of business activities on funding the University, using human and material resources more efficiently and using own and rented property,

elaboration of methods of financial stimulation to increase the number of grant projects won in the CR and in EU and to obtain funds in the form of orders and advisory service for expert subjects.

The role of quality monitoring and control in the development of the University

The role of quality monitoring and control in the development of the University is essential and is intensified particularly with regard to competitiveness of the University in the region, in the Czech Republic and internationally; for description see 5.1.

If we take the quantitative aspect to look at changes, which have taken place at the University in recent years, they appear to be favourable. Qualitative assessment is more difficult, because the changes are recent and mechanisms for their rating are not efficient enough. For example: 5-year study programmes were changed to bachelor studies (3-year) and linking up with master studies (2-year). Where these changes implemented thoroughly corresponding to the profile of a bachelor and profile of an engineer?

VII ACTION PLAN

The action plan of MUAF was compiled on the basis of the analysis of the Long-term Plan of MUAF for the period 1999–2005, on the analysis of the evaluation of strengths and weaknesses of MUAF within the framework of the present evaluation report (see 3.4). This action plan will be the starting point for the elaboration of a new Long-term Plan of MUAF for the period 2005–2010.

Strengths of MUAF

Education and studies

1. Harmonised and systematic application of the Bologna model; applying ECTS in all faculties and all study courses; increasing bonds among faculties and departments when innovating the existing study courses and creating new ones; continuous wider offer of bachelor and master study courses; launching and extending study programmes accredited in English; permanent increase in the numbers of outgoing and incoming students within the framework of student mobility; increasing the qualification and language command of the academic staff; permanent keen interest in studies at all faculties of the University and a steady number of applicants considerably exceeding the entrance quota.
2. Research

High standard of quality and success rate of research at all workplaces based on the long tradition of high-quality basic research; increasing volume of funds obtained from grants; tendency to intensify interdisciplinary research; continuing preparation for accession to research programmes of EU; launching an internal grant agency to enhance specific research.

Organisation structure

High standard of interconnection of university and faculties; optimisation of the ratio between centralisation and decentralisation of the organisation components of the University

Management

Centralisation in decision-making on principal issues of the University's development; interconnecting strategic plans of the University and faculties; uniform enforcement of pivotal developmental tendencies in education and research (internationalisation of the University and faculties, uniform criteria for habilitation and professor procedures etc.); efforts for professionalism of the pivotal managerial functions in administration.

Infrastructure

Launching and continuous improvement of the University Information System; increasing the number of teaching rooms by building the new pavilion Q; modernisation of technology of education.

Others

Localisation of the University in a region, which has a long tradition of higher education; successful co-operation with local and regional bodies.

Weaknesses

Education and studies

Restriction in inter-faculty co-operation in education; age and qualification structure of the academic community; slow introduction of progressive methods and form of studies (distance studies, e-learning), slow development of some forms of lifelong education; stagnating, even decreasing, numbers of outgoing and incoming teachers within the SOCRATES mobility.

Research

Relatively small integration into international research projects and research teams; uneven quality standard of research at the respective faculties; tendency to prefer quantity to quality when presenting research results

Organisation structure

Insufficient all-university structures, which would prevent duplication of some organisation and administration activities

Management

Relatively poor quality control and efficiency of management in the form of feedback in terms of the University – faculty; no effective mechanisms for internal quality control in research; absence of systematic education of senior administrative executives in management, the application and modernisation of computer technology

5 Infrastructure

Insufficient capacity of accommodation rendering it impossible to satisfy the demands of all the commuting students; insufficient funds to enlarge the book stock, especially with international publications

Others

Unequal identification of all faculties with the objectives of the University as a whole; unequal degree of involvement of the faculties in these objectives.