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u Zagrebu
Agronomski
fakultet



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Foreword

"Melius est recurrere quam male currere"

Dear readers,

This is the last Annual Report foreword at the end of this term of office.

At an onset of the term, our aim was to inform general public about our activities and successes...

It is up to you to evaluate how successful have we been.

We also wanted to encourage others to do the same and thus contribute to the Croatian educational and scientific system.

In the past years we received numerous letters and congratulations for our successes. We would like to thank all the senders since it is nice when other recognise your achievements!

We also wanted to learn about our imperfection in order to intensify the efforts on preserving our virtues. We partly succeeded. In my opinion, the most important virtues of our Faculty are sense of work and order and good application of science in practice, which certainly rendered ever better results in particular disciplines of agriculture.

We do not cherish the virtues we do not have, since it is an attitude that diminishes someone's merits.

During the past year we have certainly proven our *raison d'être*!

Let me finish this Foreword by reminding you, on my behalf and on behalf of the vice-deans, of the HYMN OF EUROPE:

*Est Europa nunc unita
et unita maneat;
una in diversitate
pacem mundi augeat.
Semper regant in Europa
fides et iustitia
et libertas populorum
in maiore patria.
Cives, floreat Europa,
Opus magnum vocat vos.
Stellae signa sunt in caelo
aureae, quae iungant nos.*

We have contributed to the European image of Croatia,
and we have run well

Professor  Horvank, PhD
The Faculty Dean

At the end of the term...

When our term started, we all wanted to do a lot and to do it good ...

So we started!

We started with cleanup of the Faculty area. Have you forgotten how did the parking lot in front of the old administration building look like? Have you forgotten the old path from the tram to the Faculty? Good if you have! We have all learned that it can be better.

We have forgotten frequently neglected surrounding areas that demand hard work because they are large. Would it be better if we were situated in the city, amidst concrete structures? No, because we have a chance to enjoy a vision of a future eastern campus, a large number of new halls for our students and the auxiliary facilities we cannot do without! Across the brook, the structures with caved-in roofs have been reconstructed, and some of these premises dedicated to teaching purposes.

We should not forget that the procedure for registration of title on our property, and return of the one that has finally become ours even on the paper is almost over. And it was not easy!

We should also remind ourselves that we moved into a new campus building, and the whole process demanded an exceptional dedication and effort to settle the relations between the Faculty, University of Zagreb and the Ministry.

Numerous other actions were taken and activities performed, as you will read below.

We would like to conclude with a thought that "the best off are those who work since they actually cannot do wrong". Even if we occasionally failed, when we look back we see what we are leaving behind for the Faculty, and that speaks the best of what we have done.

The Faculty Dean and Vice-Deans

Editorial

"Littera scripta manet"

Dear readers,

What we have written about ourselves shall remain for both the future generations and us. Those who want or need to learn something about the life and work of the University of Zagreb Faculty of Agriculture (FAZ) may reach for our Annual Reports and, we hope, find interesting and useful information.

This Annual Report of the University of Zagreb Faculty of Agriculture published in English is an abbreviated version of the Croatian edition that is traditionally published on the Faculty Day (26 September). The Report covers the period from 1 June 2005 to 31 May 2006, and does not include the business indicators for the calendar year (1 January to 31 December 2005). This year, we are proud of marking the fifth anniversary of this publication.

The Editorial Board intends to inform the readers about the FAZ structure and organisation, and to present the major activities pursued by the FAZ – education, scientific research and professional activities, publishing, library, and information technology, promotion of our institution in Croatia and intensive and dynamic international collaboration. We consider diverse activities of our students, and research, professional and educational activities carried out at the experiment stations to be equally important.

Several important facts should be underscored about the reporting period. Implementation of the curriculum and study programs based on the principles of the Bologna Declaration started and nine new undergraduate studies, approved by the Ministry of Science, Education and Sports (the Ministry), were introduced in the academic year 2005-2006. Further, the Faculty was approved (guaranteed) to start with two new postgraduate (doctoral) studies, the Agricultural Economics study in 2005 and Agricultural Sciences in 2006. In addition to the previous successfully completed project, another international TEMPUS project was launched in 2006.

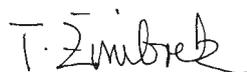
The scientific research activities were marked by bringing to final stage about 60 scientific research projects started in 2002 and supported by the Ministry, and application of about 90 new scientific research projects included in some twenty programs under the new conditions the Ministry has set up for the next three-year scientific research period.

The year 2006 shall go down in FAZ history as a year when the new 6th campus building was open and put into use, after almost ten years of construction. The additional 5,500 square meters of floor area shall considerably improve the teaching and scientific work standards.

We shall be happy if we succeeded in our intention to enable you to learn more about us from our Annual Reports.

Thank you for your interest.

For the Editorial Board



Professor Tito Žimbrek, PhD

Editor-in-Chief

Zagreb, 26 September 2006

Contents

FOUNDING AND ORGANIZATION	Registration and Statutes	1
	Management	1
	Faculty Council	2
	Boards and Committees	2
	Organisation	2
	Employees and Changes	3
FINANCIAL PERFORMANCE, INVESTMENT PROJECTS AND PROPERTY	Financial Performance	7
	Investments	9
	Faculty Property	9
TEACHING ACTIVITIES	On New Study Programs – General.....	11
	Undergraduate Study Program	12
	Undergraduate, Graduate and Professional Study Programs in Croatia and Bosnia and Herzegovina Co-organized by FAZ and Other Institutions/Organisations	19
	Postgraduate (Doctoral) Studies.....	20
	Dissertations	22
	Project TEMPUS CD-JEP ³ Agribusiness Higher Education Development	23
SCIENTIFIC RESEARCH AND PROFESSIONAL ACTIVITIES	Introduction.....	27
	Projects Contracted with the Ministry of Science, Education and Sports.....	27
	Projects Contracted with the Ministry of Agriculture, Forestry and Water Management	28
	Projects Contracted with National and Regional Administration, Companies and Entrepreneurs	28
	Junior Researchers.....	29
	Presentation and Dissemination of Research Results.....	29
	Annual National Science Awards Presented to FAZ Researchers in the Field of Biotechnical Sciences During the Period 2001 to 2005.....	31
EXPERIMENT STATIONS	Introduction.....	33
	Experiment Stations Production Capacities (Land and Livestock)	33
	Experiment Stations Completely Managed by FAZ	34
	Experiment Stations Managed by the FAZ Departments	35
	Maksimir Experiment Station.....	35
	Jazbina Experiment Station	40
	Experiment Centers	42
PUBLISHING, LIBRARIES AND IT ACTIVITIES	Publishing	45
	Libraries	46
	IT Activities	47
STUDENTS' ORGANISATION AND ACTIVITIES	FAZ Student Assembly Chapter	49
	IAAS Croatia /FAZ/	49
	STUDA Association of Students of Agriculture.....	50
	USKA Landscape Architecture Students' Group	52
	Awards, Commendations, Acknowledgements	52
	Report on Physical and Health Culture Course	53
	Student Extracurricular Activities.....	54

FAZ PROMOTIONAL ACTIVITIES	Introduction.....	57
	Plaque, Acknowledgements and Awards Received by the FAZ Staff	58
	Awards, Acknowledgement, Plaques, Certificates of Merit FAZ Received from Other Institutions	58
	Tenth Convention of the University of Zagreb.....	59
	University of Zagreb Faculty of Agriculture Alumni Association (AMCA-FAZ Association)	59
INTERNATIONAL COOPERATION	International Relations Office (IRO) Organisation	61
	IRO Scope of Activities.....	61
	IRO Activities during the Reporting Period 2005-2006.....	62
	International Collaboration and Exchange	62
	International Projects.....	64
	International Exchange	66
	Miscellaneous	67
APPENDIX	69
Foto album	73

FOUNDING AND ORGANISATION

Registration and Statutes

The Faculty of Agriculture of the University of Zagreb (FAZ) is registered with the Zagreb Commercial Court, and the Court Decision of 23 July 1997 makes it a legal successor of the Faculty of Agricultural Sciences, University of Zagreb.

By the Decision of the Ministry of Science, Education and Sports of 15 February 1996, the FAZ was entered into the Ministry Directory as a scientific research entity.

The FAZ Statutes were adopted at the Faculty Council (FC) meeting of 14 July 2005 and came into force on 7 December 2005 after its approval by the Senate of the University of Zagreb. The Statutes are harmonised with the Bologna Declaration, the Research and Higher Education Act, and the Statutes of the University of Zagreb.

Management

The FAZ management organisation ensues from the stipulations of the Institutions Act, Research and Higher Education Act, the Statutes of the University of Zagreb, and the FAZ Statutes. The FAZ Dean is a chief executive officer of the Faculty, elected and appointed by the Faculty Council for a three-year term. The Dean is assisted in his work by four vice-deans and a secretary. The vice-deans are Professor Vesna Pavić, PhD, Dean for Academic Affairs, Professor Tito Žimbrek, PhD, Dean for Scientific Affairs, Professor Ivan Pejić, PhD, Dean for International Relations, and Assistant Professor Davor Havranek, PhD, Dean for Management. In decision-making on financial and investment issues, the Dean is assisted by the Board for Organisation, Finances and Investment appointed by the FC upon the Dean's recommendation. The former Dean Professor Jasmina Havranek, PhD, was re-elected in April 2003 for the academic years 2003-2004 and 2004-2005, pursuant to the provisions of the Statutes then in force, same as Professor Vesna Pavić, PhD, Dean for Academic Affairs, and Professor Tito Žimbrek, PhD, Dean for Scientific Affairs. The FC appointed Professor Ivan Pejić, PhD the Dean for International Relations and Assistant Professor Davor Havranek, PhD, Dean for Management at its sessions of 6 October 2003 and 10 May 2004, respectively. However, upon recommendation of the University of Zagreb Commission for Enforcement of Legislation, in their meeting of 16 May 2005, the FC members brought a unanimous decision to reappoint the Dean and the Vice-Deans for another academic year (2005-2006), pursuant to the provisions of Article 135 of the FAZ Statutes.

At its session of 29 May 2006, out of three applicants for the Faculty dean, the FC selected by secret majority vote and appointed for a next three-year term (academic years 2006-2007, 2007-2008 and 2008-2009) Professor Davor Romić, PhD who starts his term on 1 October 2006, at the beginning of the next academic year.

Faculty Council

The technical support to teaching and scientific research activities is rendered by the Faculty Council (FC). The FC is founded pursuant to the stipulations of the FAZ Statutes and it comprises elected representatives of full and associate professors, assistant professors, lecturers, teaching assistants and students - 76 members in all. The FC working during the reporting period was elected for a two-year term, from 1 October 2003 to 30 September 2005. It included 23 full professors, 28 associate professors, 13 assistant professors, 1 senior lecturer, 1 senior teaching assistant, 1 teaching assistant, 1 junior teaching assistant¹, and 8 students. Since the FC was convened in 2003, appointment ranks of some members have changed, so the composition of the FC changed accordingly.

The FC members, same as the Faculty deans and department heads were re-appointed for another academic year, until 30 September 2006. Currently, the FC members include 27 full professors, 27 associate professors, 11 assistant professors, 1 senior teaching assistant, 1 senior lecturer, 1 teaching assistant, and 8 students. During the reporting period, FC held 14 sessions (10 ordinary and four extraordinary). The new FC members will be elected before the term of office of the working FC expires.

FACULTY COUNCIL (76)

Members	Bodies
Full professors (27)	Boards (11* – 99**)
Associate professors(27)	Committees (23* – 145**)
Assistant professors (11)	ACS (23**), and web site (11**) Editorial Boards
Senior teaching assistants (1)	Faculty Tribunal and Factfinder (6+1**)
Teaching assistants (1)	International Relations Office (3**)
Senior lecturers (1)	
Students (8)	

* number of bodies; ** number of members

Boards and Committees

By its decisions, the FC appoints boards and committees as its bodies, pursuant to the stipulations of the Statutes. Exceptionally, in urgent cases, some committees are appointed by the Dean. Late in June 2006, 11 boards and 23 committees have been working. Number of boards and committees changes during the term of office, since some finish their work and others are founded, as required. The FC boards have 99 members, including the students' representatives, and the FC committees have 145 members.

Many members of these bodies are involved in work of other FC bodies, being mentor teachers, members of the Court of Honour or editorial boards of regular and periodical FAZ publications, web site or in other activities. Since the academic year 2005-2006, in line with the new system based on the Bologna process, these bodies include coordinators of 9 undergraduate and 15 graduate study programs, and mentor teachers to the students according to the new system.

Organisation

Departments ::

The FAZ organisation is based on 28 departments. The departments are responsible for cost-efficient use of material, financial and other resources put at their disposal, for proposing of measures for improvement of material, financial and human resources, and performing teaching, scientific research, and professional work. A department is managed by department head appointed by the FC upon proposal of the department at the beginning of an academic year. New department heads were appointed and the earlier heads and their deputies re-appointed for the new two-year term of office (from 2003-2004 to 2004-2005). Upon recommendation of the University of Zagreb Commission for Enforcement of Legislation, the department heads and their deputies were extended their terms for another academic year,

¹ The title of 'junior teaching assistant' has no longer been in use since 2003, so all academic staff in that rank were promoted into the rank of 'teaching assistant'.

till the end of the academic year 2005-2006. (List of departments, heads and deputy heads is enclosed herewith.)

Early in academic year 2006-2007, pursuant to the provisions of the FAZ Statutes, the FC shall appoint the department heads and their deputies for the next three-year term.

Late in May 2006, the FAZ departments had altogether 347 members of staff, i.e. about 12.4 members of staff per department (from 4 to 36). The number of staff depends on whether a department manages an experiment station. Compared to the year 2002 (the 1st FAZ Annual Report), the department staff increased by 39 members.

Administration ::

The FAZ Administration consists of corporate services, including the Dean's Office, corporate, legal, human resources and students' admission service, maintenance and security, safety-at-work, accounting, Central Agricultural Library (CAL), International Relations Office (IRO), Agricultural Scientific Review (ACS), web site Editorial Board, system engineer, and Physical and Health Culture Section. The corporate services (administration) employ 50 members of staff. Compared to 2002, the year of the 1st Annual Report, the staff increased by 10 members. Out of six experiment stations, two are managed by the FAZ and four experiment stations are run by individual FAZ departments. One of these experiment stations (Šašinovečki Lug) is still in process of foundation. The Maksimir Experiment Station in 25 Svetošimunska St. consists of five sections, each managed by one FAZ department, and Jazbina Experiment Station consists of two sections managed by two departments. The Sljeme Center Experiment Station on Mt. Medvednica is run by one department, same as the Dubrovnik Experiment Station. Compared to the previous reporting period, number of the FAZ, namely department experiment stations has not changed.

Employees and Changes

As of 31 May 2006, the FAZ had 388 full-time and 9 part-time employees (total number of employees 397). Number of employees has increased in the recent years. In 2006, the number of employees increased by 10 compared to the previous year (25 newly employed, 15 left

FAZ full-time and part-time employees, 2002-2006
-as of 31 May -

Year	2002	2003	2004	2005	2006
No. of employees	348	362	372	387	397
Index	100	104	107	111	114

the FAZ staff), and it has 49 employees more (10 in administration and 39 in departments) compared to the year 2002.

During the reporting period, the highest employment rates were those for junior researchers (8) and teaching assistants (7). Other new employees were: administrative staff (3), technical assistants (2), staff associates (2), assistant professor (1), and technical staff (2). Most of newly employed are part-time staff. Fifteen employees terminated their employment during the reporting period by consent (4), retirement (3), and work contract termination (7) and notice of termination (1). Seventeen female members of the staff are at maternity leave. The employment fluctuations do not significantly differ from the previous reporting period.

Qualifications ::

In total number of FAZ full-time staff (N+388), doctors of science account for more than one third (34.8%), somewhat over one tenth are masters of science (11.6%), nearly one quarter are employees with university degrees (23.7%), and somewhat more than one fifth with secondary school degrees (21.4%), and others (8.5%) are semi-qualified staff. Among the part-time employees (N=9), most staff members have university diploma degrees (5), than secondary school degrees (3), and one is semi-qualified.

Compared to the last year, the largest increase was among the staff with doctor's and master's degree, six and five more, respectively, which is a favourable change.

Fill-time employees as per qualifications and changes (2004 - 2006) - as of 31 May -

Qualification	2004		2005		2006		Index*
	Number	Share %	Number	Share %	Number	Share %	
Doctor of sciences	122	33.8	129	34.0	135	34.8	110.7
Master of sciences	40	11.1	40	10.6	45	11.6	112.5
University degree	69	19.1	83	21.9	82	21.1	118.8
Associate degree	9	2.5	9	2.4	10	2.6	111.1
Secondary education	86	23.8	83	21.9	83	21.4	96.5
Basic education	35	9.7	35	9.2	33	8.5	94.3
Total	361	100.0	379	100.0	388	100.0	107.5

* 2004 =100

Out of total hundred and thirty-five doctors of sciences, hundred and eighteen (87.4%) are full professors, associate professors and assistant professors. This academic title has also been earned by six senior teaching assistants, one senior lecturer, four teaching assistants, one senior research associate, two staff associates and three junior researchers. Among forty-five masters of sciences, twenty-one (46.7%) are junior researchers, eighteen teaching assistants, three staff associates, two lecturers and one is senior lecturer.

Faculty Staff ::

The professors (from assistant professors to full professors) total 118 or 53.4% of teaching staff, of which 36 full professors (23 tenures and 13 first appointments), 39 associate professors, 43 assistant professors, and one professor emeritus.

Number and shares of the FAZ lecturers and teaching associates and changes in 2004-2005 - as of 31 May -

Appointment rank /Year	2004		2005		2006		Index <u>2006/2004</u>
	Number	Share %	Number	Share %	Number	Share %	
Full professors, total	30	15.7	32	15.2	36	16.3	120.0
- tenure	22	(11.5)	23	(10.9)	23	(10.4)	104.5
- first appointment	8	(4.2)	9	(4.3)	13	(5.9)	162.5
Associate professors	30	15.7	38	18.1	39	17.6	130.0
Assistant professors	41	21.5	43	20.5	43	19.5	104.9
(I.) Professors, total	101	52.9	113	53.8	118	53.4	116.8
Teaching assistants, total	45	23.6	38	18.1	42	19.0	93.3
- senior teaching assistants	13	(6.8)	6	(2.9)	6	(2.7)	46.2
- teaching assistants	29	(15.2)	32	(15.2)	36	(16.3)	124.1
- junior teaching assistants*)	3	(1.6)	-	-	-	-	-
Lecturers, total	4	2.0	4	(2.0)	5	2.3	125.0
- senior lecturers	2	(1.0)	2	(1.0)	2	(0.9)	100.0
- lecturers	2	(1.0)	2	(1.0)	3	(1.4)	150.0
(II.) Associates, total	49	25.7	42	20.0	47	21.3	95.9
Professors and associates, total	150	78.6	155	73.8	165	74.7	110.0
(III.) Junior researchers	41	21.4	55	26.1	56	25.3	136.6
Total (I.+ II.+ III.)	191	100.0	210	100.0	221	100.0	115.7

* Promoted to 'teaching assistants'.

Teaching associates (not including junior researchers) number 47, which makes altogether 165 professors and associates. Since the junior researchers take part not only in scientific research projects, but also in preparation of the lectures and in teaching process, the total number of teaching staff is actually higher for 56. Total number is 221 professors and teaching associates, i.e. 55.7% of total number of employees (397). Compared to the previous reporting period, number of professors increased, mostly the number of the first appointed full professors, while the number of tenures and assistant professors remained the same. Number of teaching associates increased, particularly the number of teaching assistants (by 4).

Promotion to Higher Ranks ::

During the reporting period, 26 members of the FAZ staff were promoted into the higher rank, i.e. one tenure, five full professors - first appointment, six associate professors, six assistant professors, and two senior teaching assistants. Additionally, six newly employed members of staff have the academic rank of teaching assistant. Compared to the previous reporting period, five promotions less were made, and the same number of tenures (1), three more full professors and 10 less associate professors were promoted.

Promotion of professors to higher ranks during five reporting years (2001-2002 to 2005-2006*)

Appointment rank /Reporting year	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Professors**					
Full professor	-	2	3	3	6
- tenure	-	1	2	1	1
- first appointment	-	1	1	2	5
Associate professors	2	10	11	10	6
Assistant professors	6	8	7	16	6
Professors, total	8	20	21	29	18
Associates***					
Senior teaching assistants	3	7	2	2	2
Teaching assistants	4	3	8	5	6
Senior lecturers	-	1	-	-	-
Lecturers	-	-	1	1	-
Associates, total	7	11	11	8	8

* As of 31 May of respective year.

** Number of professors who remained in the same rank included.

*** Newly employed associates, mostly "teaching assistant" included.

Staff Age and Gender ::

On average, a full professor is 60 years of age, an associate professor 49 years, assistant professor 45, teaching assistant 33, and junior researcher 30 years of age. Compared to the previous year, an average age of full professors and assistant professors decreased slightly, of senior teaching assistants notably. The age of associate professors and teaching assistants changed, but the changes are not significant. The age difference between male and female teaching and assistant population is not significant.

FAZ staff number and breakdown by age and gender, 2006 -as of 31 May 2006 -

Appointment rank	Number	Mean age, years	Female (%)
Full professors	36	60	19
Associate professors	39	49	36
Assistant professors	43	45	35
Senior teaching assistants	6	38	33
Teaching assistants	36	33	58
Junior researchers	56	30	54

Lecturers and senior lecturers were not included because of their low number (5 in total)

Considering gender, most full professors are male (81%), with only 19 % of women in the rank. Number of female associate professors, assistant professors and senior teaching assistants is higher, i.e. about one-third on average. In the rank of teaching assistant and junior researchers, more than one half is female staff.

FINANCIAL PERFORMANCE, INVESTMENT PROJECTS AND PROPERTY

Financial Performance

Introduction ::

The FAZ financial performance data refer to the calendar year 2005 and, in compliance with the legal requirements, they are presented in Annual Statement, thus the presented data cover a calendar year rather than the reporting period.

FAZ Financial Performance, 1 January-31 December 2005 ::

Compared to 2004, total revenue increased by HRK 20,302,856 (index 123.89), as revenues from the syndicated loan of the University of Zagreb for completion and furnishing of the 6th campus building. Increase in expenses of HRK 19,804,712 (index 123.51) relates to investments into the 6th campus building. Revenues less expenses in the amount of HRK 1,234,863 is by HRK 498,144 more than in previous year (index 167.61)

Ravenues ::

The internally generated revenues account for 21.50% of total revenues. The scientific projects and professional services in the amount of HRK 13,620,048 participate in the internally generated revenue with the highest share (60.17%). Other revenues in the amount of HRK 9,016,222 (39.83%) include co-financed scientific projects, services, undergraduate and postgraduate study fees, and other minor items.

Revenues and revenue sources, expenses, revenues less expenses

Item	HRK	%	Index 2005/2004
Revenues from National Budget	82,642,628	78.50	127.10
Internally generated revenues	22,636,270	21.50	113.42
Total revenues	105,278,898	100.00	123.89
Total expenses	104,044,035		123.51
Revenues less expenses	1,234,863		167.61

Internally generated revenues breakdown

Item	HRK	%	Index 2005/2004
Total	22,636,270	100.00	113.41
Projects and services	13,620,048	60.17	119.01
Other revenues *	9,016,222	39.83	105.88

* Revenues from co-financed projects, services, undergraduate and postgraduate study fees, assets.

Expenses ::

The highest expense item in the amount of HRK 44,108,792 are salaries (42.40%), material expenses and service fees in the amount of HRK 14,581,106 (14.02%), and expenses for procurement of scientific equipment in the amount of HRK 20,910,109 (20.10%) and investment into completion of the 6th campus building in the amount of HRK 2,356,705 (2.26%). These items are partly covered from the National Budget, and furnishing and finishing works are paid from the syndicated loan of the University of Zagreb. The difference is covered from the internally generated revenues, since they are connected with implementation of projects. Equipment procurement expenses were exceptionally high in 2005, because of the furnishing of the 6th campus building that was completed and put to use. Other expenses in the amount of HRK 22,084,323 (21.22%) include travel expenses, service fees, and maintenance of buildings, facilities and equipment.

Expenses breakdown

Item	HRK	%	Index 2005/2004
Total	104,044,035	100.00	123.51
Salaries	44,108,792	42.40	106.00
Material costs and service fees	14,581,106	14.02	112.43
Equipment	20,910,109	20.10	689.67
Capital investment	2,356,705	2.26	9.43
Other expenses *	22,084,323	21.22	118.59

* Travelling expenses, service fees, maintenance of buildings, facilities and equipment..

Comparison of 2005 expenses breakdown with the 2004 expenses shows a slight increase in material costs and service fees (index 112.43), and increase in expenses for salaries (index 106.00), which is not due to salaries raise but rather to an increase in number of employees (junior researchers). The investment into equipment (index 689.67) mainly relates to furnishing of the 6th campus building and it is not comparable with the previous year. Capital investment in new projects is lower compared to the previous year since the new building is now finished.

Equipment Expenses

In 2005, FAZ procured equipment for HRK 20,910,109. The National Budget financed procurement in the amount of HRK 3,320,286 through the VAT refunds for equipment approved by the Ministry, and for the ARC projects supported by the Ministry of Agriculture, Forestry and Water Management (the Ministry of Agriculture). The proceeds of the syndicated loan of the University of Zagreb in the amount of HRK 15,920,887 were invested in furnishing of the 6th campus building with laboratory equipment and furniture. During the first quarter of 2006, HRK 1,703,475 was invested into equipment, and HRK 541.490 in capital projects (6th building, finishing works). The National Budget financed 69.26% of expenses.

Value of equipment purchased in the respective periods -HRK-

Period	Total	Monthly average
1 Jan-31 Dec 2005	20,910,109	1,742,509
1 Jan-31 Mar 2006	1,703,475	567,825

Equipment Procurement by the End of 2006

The Ministry approved co-funding of the equipment in 2005, based on the applications of the main researchers on the scientific projects funded by the Ministry, i.e. from the VAT refunds in the amount of HRK 2,849,087. The equipment will also be purchased from the internally generated revenue of the FAZ and its departments, and through direct funding and co-funding from the projects supported by the Ministry and the Ministry of Agriculture.

Investments

During the reporting period, numerous works were done on reconstruction of the old campus buildings and other FAZ premises in order to improve the services and working standard for teaching and research activities. Reconstruction was carried out on the roofs, water supply and electricity utilities, old classrooms were converted and the new one constructed. After reconstruction of the 5th campus building, the lecture room was furnished for the students of the Executive MBA Training in Agribusiness and Commerce course, the new students' admission service offices, new gate house, and new computer room with a system engineer's room. The telephone exchange was completely refurbished, along with the computer network, and the fibre optic cables installed. New utilities were installed in auxiliary buildings and the experiment stations, new benches placed, and a modern fence erected at the eastern end of the FAZ property. The design documentation was prepared for the new parking lot in the back of the 3rd campus building, and new roads with parking lots as an extension of the road on the eastern side of the 6th campus building. The new road will connect to the Tvrtka Miloša street and run to the FAZ garages.

The public lighting is being installed in the Fakultetsko Dobro street, and in an area between the Bliznec Brook and the Fakultetsko Dobro street (grant of the City of Zagreb).

However, the largest amount was invested into completion of the 6th campus building, opened by the Prime Minister Dr Ivo Sanader at a celebration late in 2005. The new FAZ 6th campus building, the ten-year project, was funded from the Ministry budget. This 64-million Croatian Kunas worth project was conceived by the architect Dr Hildegard Auf-Franić, full professor at the University of Zagreb Faculty of Architecture.

The modern building with gross floor area of 5,500 m² is exceptionally important for the teaching and research activities at the University of Zagreb Faculty of Agriculture, and for education, scientific research and professional activities in the field of biotechnical science in general.

The new building has two lecture rooms. The larger one with 202 seats is furnished for multimedia lectures, and the smaller one has 158 seats. The premises for the dean and supporting services, a conference hall (110 seats) and a conference room (18 sets), and 62 studies for the teaching and research staff are provided. The new 6th campus building has six fully equipped practical work classrooms and state-of-the-art laboratories for soil physics and chemistry, and plant physiology (120 m² each). The plant physiology laboratory is equipped with phytotrones, i.e. the growth chambers in which all the factors of plant growth and development may be simulated (temperature, humidity, light of different wavelength, etc.). The new building is primarily intended for students, teaching and research staff working with soil and plants, but it also serves the entire field plant sciences and related disciplines.

Faculty Property

The Faculty property includes buildings and land. The built structures (buildings, farm structures, business premises and living quarters), and the farm land (experiment stations, meadows, pastures, etc.) are located in Svetošimunska Cesta street, Fakultetsko Dobro street, Ferenšćica, Jazbina, Sljeme- Medvednica and Šašincev locations.

The FAZ currently owns about a hundred built structures and about a hundred hectares of land. During the reporting period, FAZ continued with the activities aimed at improvements and protection of its properties by investment into construction of the new ones and maintenance of the existing buildings, their conversion, and maintenance of the existing utilities (water supply, sewerage, electricity supply).

Intensive actions were undertaken to resolve the legal status of the FAZ properties by registration of title in the Land Registry. After years of litigation, the FAZ management succeeded in title registration for the buildings and land at Ferenšćica (property of the former Faculty Department of Agricultural Engineering). The title of buildings and land at the Jazbina Experiment Station had been regulated earlier. An agreement signed with the University of

Zagreb Faculty of Forestry regulated the relations regarding property at the Svetošimunska Cesta street and Fakultetsko Dobro locations and the Center for Grasses Experiment Station, Mt. Medvednica.

The title for the Svetošimunska Cesta and Fakultetsko Dobro locations in Maksimir was partly settled in the court proceedings, although this is beyond doubt the FAZ property save for the Faculty of Forestry buildings.

The Faculty property Šašinovečki Lug Experiment Station (Šašinovec near Sesvete, Zagreb suburbs) along with the structures (barracks) had belonged to the FAZ since the FAZ foundation until 1945. Under the then Agrarian Reform Act, the property was pronounced the property of the Republic of Croatia, accordingly entered into the Land Registry, and given for use to the Croatian Cattle Selection Center, now Croatian Cattle Breeding Center (CCBC), which is still using it.

In 2002, FAZ submitted its request for initiation of proceedings for return of FAZ property to the Ministry of Agriculture and Forestry, now Ministry of Agriculture, Forestry and Water Management. Since the property was entered into the title registry as the socially owned property of the Republic of Croatia, the Croatian Government was responsible to make a decision. It was brought on 4 April 2003, and the FAZ undertook to indemnify the Croatian Cattle Breeding Center for the buildings erected on the property. The FAZ needs the returned property for setting up of new experiment stations, particularly within the framework of the new educational programs based on the Bologna process.

TEACHING ACTIVITIES

Until the academic year 2005-2006 FAZ organised and carried out the university undergraduate program according to the curriculum applied since the academic year 1996-1997. The teaching process under this study program shall be continued with the 2nd year and older students, but no admissions of new students for this curriculum were approved in the academic year 2005-2006, because the implementation of the Bologna process started (3+2+3) (180+120+180 ECTS), according to the accreditation of the Ministry given to the FAZ in 2005. FAZ was given accreditations for 9 undergraduate and 13 graduate studies.

On New Study Programs – General

The basic difference between the new and old study program is that now the university education is based on a two-cycle system. The earlier four-year (later 4.5-year) study program under which the students who finished their studies acquired the diploma of graduate engineers is now separated into the three-year undergraduate and two-year graduate study.

As already said, in the academic year 2005-2006 FAZ started 9 undergraduate study programs (6 semesters, 180 ECTS credits) for all the applicants that passed the entrance exams identical for all the study programs. Although the undergraduate studies are independent from each other, all first-semester students attend several ground modules. From the second semester on, they start with elective modules. The third study year is flexible, i.e. the students are given an opportunity to choose between the modules finishing their studies or those enabling direct continuation of the graduate studies.

FAZ undergraduate and graduate study programs

Undergraduate (BSc) study program	Graduate (MSc) study program
1. Agricultural Economics	1. Agribusiness and Rural Development
2. Agricology	2. Agricology
3. Animal Science	3. Animal Genetics and Breeding
4. Plant Science	4. Meat production and Processing
5. Organic Agriculture	5. Milk Production and Processing
6. Horticulture	6. Fisheries and Game
7. Landscape Architecture	7. Feed and Animal Nutrition
8. Agricultural Engineering	8. Plant Science
9. Plant Protection	9. Organic Agriculture and Agritourism
	10. Horticulture
	11. Landscape Architecture
	12. Agricultural Engineering
	13. Phytomedicine

Graduate program majors:

Agricology: 1) Microbial Biotechnology in Agriculture; 2) Agricology

Horticulture: 1) Vegetable Crops; 2) Viticulture and Enology; 3) Pomology; 4) Ornamental Plants

Agricultural Engineering: 1) Soil Improvement; 2) Machinery

After passing the exams and defending their theses and thus completing their three-year undergraduate studies (180 ECTS), the students are awarded the academic title of baccalaureus (bachelor of science) with a reference of specialisation and the may either find professional employment or continue their education in one of 13 two-year graduate studies (120 ECTS). The advantage of the undergraduate courses is that they enable a student to freely choose and enrol in different graduate study programs, which might be unrelated to the courses in which he/she majored. This principle applies at the Faculty, the Croatian universities and international educational institutions. After preparation and defending of their theses

and thus completing the graduate study program, the students earn a degree of master of science in specific profession, similar to the practice in most European countries. Completed graduate (master's) program enables students to continue their education at the three-year postgraduate (doctoral) study program at FAZ or other institutions.

Undergraduate Study Program

Old Undergraduate Studies ::
(since the academic year 1996-1997)

The so-called old undergraduate studies have been conducted since the academic year 1995-1996 as a 9-semester study with three study programs. Two study programs (Plant Science and Animal Science) have majors that start after the second study year, and one program (Landscape Architecture) has no majors:

1. Plant Science (PS) study program, with seven majors: (i) Agricultural Economics (AEC), (ii) Agricultural Engineering (AEN), (iii) Agronomy (AGR), (iv) Land Management and Soil Protection (LMSP), (v) Pomology, Viticulture and Enology (HORT), (vi) Gardening (GARD), and (vii), Plant Protection (PP);
2. Animal Science (AS) study program, with three majors: (i) Dairy Science (DS), (ii) Animal Husbandry (AH), (iii) Fisheries (FISH);
Although the studies are independent, they share some core disciplines. From the 5th semester (3rd study year), Plant Science study program branches into seven, and Animal Science into three majors.
3. Landscape Architecture (LA), is an interdisciplinary study with no majors.

The students who finish their undergraduate studies, prepare and defend their graduation theses earn an academic degree of graduate agricultural engineers (dipl. ing. agr.) in a specific major and program.

The last generation of students who studied according to the old program enrolled in the academic year 2004-2005, so in the academic year 2005-2006 they continued their education at the 2nd year.

(During the next four academic years, the FAZ teaching staff shall teach according to both the old and new study program (Bologna process).

Enrolments - Old Study Program ::

In the academic year 2005-2006, the FAZ had 1,263 students studying according to the old study program. The Plant Science had the most - 988 students or 78.2%, Animal Science 171 student or 13.6%, and Landscape Architecture 104 students or 8.2%. Analysed by study years, the Plant Science and Landscape Architecture students' number has significantly increased, and the number of Animal Science students decreased. The difference is clear from the comparison with the enrolment quotas.

Breakdown of study programs by number of students 2nd to 5th study year) and comparison with predetermined enrolment quotas for the academic year 2005-2006 (%)

Program/Year	2nd	3rd	4th	5th	Average, 1st to 5th	Quotas	
						%	No.
Plant Science	73.7	78.7	82.4	82.5	78.2	70.0	315
Animal Science	18.8	12.6	10.6	6.8	13.6	24.4	110
Landscape Architecture	7.5	8.7	7.0	10.7	8.2	5.6	25
Total	100.0	100.0	100.0	100.0	100.0	100.0	450

The enrolments breakdown by majors shows that among Plant Science program majors the Pomology, Viticulture and Enology is on the top with 277 students, and it is the major with the highest population rate both in the Plant Science program (28.0%) and at the FAZ as a whole (33.7%), while Gardening holds the second position (17.3%).

Study program majors by percentage of students (%), 2nd to 5th study year (%)*

Position	1	2	3	4	5	6	7	8	9	10	11
Major	HORT	GARD	PP	AEC	LA**	AS	LMSP	DS	FISH	AGR	AEN
%	33.7	17.3	16.0	9.1	8.6	5.7	3.4	3.2	1.8	1.0	0.2

* Percentage of students compared to total number of students of the 2nd, 3rd, 4th and 5th study years.
** Program (not major)

The below table shows the number of students in the academic year 2005-2006 and the staff /student ratio. The first column includes the data on the 1st year students studying under the Bologna process, i.e. on all the students enrolled in nine (new) undergraduate studies.

Number of students by study years and teaching staff/student ratio for the academic year 2005-2006

Study year	1st	2nd	3rd	4th	5th	Total	Staff****/student ratio
Number of students	423*	441	389	256	177	1263** 1686***	1 : 7.65**/10.22***

* New program, ** Old program, total, *** Old and new program, total

**** Including assistant professors, associate and full professors and teaching assistants, senior teaching assistants, senior lecturers and lecturers.

In order to complete the studies under the old study program, no new 1st year students were enrolled in the academic year 2005-2006. The number of undergraduate students enrolled in nine study programs (423) is lower than the previous academic year (594) when the students enrolled according to the old study program, since the then enrolment numbers included the repeating students (175). Comparative table shows only regular students, including the students who were admitted according to the new system.

First study year enrolments (regular students) during the last five academic years

Academic year	2005-2006*	2004-2005	2003-2004	2002-2003	2001-2002
Number	423	419	350	339	373
Index	100.0	99.1	82.7	80.1	88.2

* New study (Bologna process)

The figures and indexes indicate that the number of regular students has been on permanent increase since the academic year 2001-2002. Total teaching staff/student ratio in the academic year 2005-2006 is 1:10.22, which is the most unfavourable ration compared to the previous four academic years, mostly due to an increase in number of teaching staff.

Tuition Fees ::

Out of the total number of students in the academic year 2005-2006, the Ministry pays for 83.8% students (five study years average), and 16.2% students pay their own tuition fees

Tuition fees by funding source and year of study, academic year 2005-2006

Year	Funded by the Ministry (%)	Paid by students (%)
1 st *	91.4	8.6
2 nd	75.6	24.4
3 rd	81.2	18.8
4 th	86.7	13.3
5 th	84.1	15.9
Average	83.8	16.2

* New undergraduate studies

Depending on the study year, fees payment by the students ranges from 8.6% (1st year) to 24.4% (2nd year). The highest percentage of fees funded by the Ministry is in the first study year, i.e. for the new study program, where there are no repeating students.

Percentage of the FAZ students funded by the Ministry during the last five academic years

Academic year	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Funded by the Ministry	82.3	83.5	85.1	83.1	83.8

It is clear that during the last five academic years the percentage of students funded by the Ministry was on increase until the academic year 2003-2004 (85.1%), than on decrease in the academic year 2004-2005 (83.1%), to slightly increase again in the academic year 2005-2006 (83.8), although the difference is not significant.

**Student Performance -
Old and New Study Program** ::

Average Grades for the Ten Percent Top Students

Average grades for the 10% top students in the academic year 2005-2006 show that the highest average grades were achieved by the second-year students (4.34), than the fifth-year students (4.30), while the fourth-year students had the lowest average grade (3.76). The average grades in this academic year were somewhat higher for the second and third year, and somewhat lower for the first, fourth and fifth study year.

**Ten percent of students
passing with honours during
the academic year 2005-2006
and comparison with previous
academic years**

	Study year				
	1st	2nd	3rd	4th	5th
Academic year 2005-2006					
Number of students	31*	42	40	27	19
Average grade	4.27*	4.34	4.07	3.76	4.30
Academic year 2004-2005					
Number of students	40	41	25	19	17
Average grade	4.64	4.05	3.99	4.22	4.70
Academic year 2003-2004					
Number of students	40	41	28	18	15
Average grade	4.70	3.98	4.09	4.08	4.20
Academic year 2002-2003					
Number of students	40	44	31	12	13
Average grade	4.68	3.92	3.93	4.21	4.23

* Academic year 2005-2006 - the first year students number (10%) and their average grades relate to the 1st semester of all 9 undergraduate study programs.

Average Grades

The average exam grades are presented for the 1st semester of the new study program and the 2nd year of three old study programs, namely for the 3rd, 4th and 5th year majors of Plant Science and Animal Science and for the 2nd to 5th study years of Landscape Architecture study program.

**Average grades by study
programs, majors and study years
(1st - 5th), academic year 2005-2006**

Program / Major	Study year					Average grade 3 rd -5 th Year*
	1 st	2 nd	3 rd	4 th	5 th	
New program*						
Agricultural Economics	3.27					
Agriecology	3.19					
Animal Science	3.22					
Plant Science	3.11					
Organic Agriculture	2.93					
Horticulture	3.37					
Landscape Architecture	3.58					
Agricultural Engineering	2.66					
Plant Protection	3.12					
Old program						
Plant Science		3.11				
Pomology, Viticulture and Enology			2.87	2.97	3.03	2.95
Plant Protection			3.01	3.21	3.47	3.23
Gardening			2.91	2.95	3.22	3.02
Agricultural Economics			2.75	2.96	3.30	3.00
Agricultural Engineering			2.50	3.23	2.65	2.79
Agronomy			2.96	2.85	-	2.90
LMSP			3.02	3.07	3.26	3.11
Animal Science		2.87				
Animal Husbandry			2.90	2.98	3.42	3.10
Diary Science			2.88	3.05	3.21	3.04
Fisheries			3.02	3.13	3.47	3.20
Landscape Architecture**		3.43	3.52	3.36	3.48	3.44*

* 1st semester grades

** Landscape Architecture program average for four study years (2nd-5th)

In the new study program, the top grades during the 1st semester were earned by the Landscape Architecture students (3.58), the Horticulture students (3.37), the Agricultural Economics students (3.27), etc.

In the old study program, the best second-year students were from the Landscape Architecture program (3.43), the Plant Science program (3.11) and the Animal Science study (2.87). An average grade in higher years is about average (3 or C). This grade was exceeded

by the students of Landscape Architecture (3.45 in 3rd-5th year, and 3.44 in 2nd-5th year), Plant Protection (3.23) and Fisheries (3.20). As a rule, the grades were poorer in the lower study years. In analysis of average grades, number of students in individual majors should be taken into consideration.

Number of Students as per Undergraduate Study Programs

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According to the FAZ students' admission service data, 423 students enrolled in nine undergraduate studies in the first academic year of the Bologna process implementation. The highest number of enrolments was in Horticulture (71 students or 16.78%) and Plant Science (54 students or 12.77%), and the smallest number in Landscape Architecture study (25 students or 5.91%), due to different admission quotas and interest of the students in a particular undergraduate studies.

Number and percentages of 1st semester students and coordinators in undergraduate study programs, academic year 2005-2006

Study	1 st semester enrolment		Coordinator	Admission quota	
	Number	%		Number	%
Agricultural Economics	38	9.0	Professor Damir Kovačić, PhD	35	7.7
Agriecology	49	11.6	Professor Milan Mesić, PhD	55	12.7
Animal Science	58	13.7	Professor Tomislav Treer, PhD	62	13.7
Plant Science	54	12.8	Professor Milan Pospišil, PhD	60	13.3
Organic Agriculture	40	9.5	Professor Ivica Kisić, PhD	55	12.2
Horticulture	71	16.7	Professor Ines Vršek, PhD	66	14.6
Landscape Architecture	25	5.9	Professor Branka Aničić, PhD	25	5.5
Agricultural Engineering	43	10.2	Professor Tajana Krička, PhD	35	7.7
Plant Protection	45	10.6	Professor Zvonko Ostojčić, PhD	57	12.6
Total	423	100.0		450	100.0

Source: FAZ students' admission service, as of 6 October 2005

For example, the admission quota for Landscape Architecture is 25 students, for Agricultural Economics program 35 students, and the highest, 66 students, for Horticulture study program. Some studies admitted somewhat more and other somewhat less students than stipulated by the admission quotas. According to the reports submitted by the study coordinators in mid-2006, some students gave up, so the number of students in the 2nd semester was smaller in the 1st semester. For example, according to the coordinator's report, less than half of students (46%) of Agricultural Engineering passed into the 2nd semester, while most (85%) of students enrolled in Landscape Architecture reached the 2nd semester.

The exact data on students' performance, overall and by individual study programs, will be known at the beginning of the next academic year, after admission into the 3rd semester of the new undergraduate studies.

The undergraduate studies are regulated by the Rules on Undergraduate Study Program adopted at the FC session of 14 July 2005. Additionally, based on the proposal submitted by the teaching staff conference of individual studies, FC selected and elected the study coordinators (see the above table) responsible for functioning of the undergraduate study program, convening the study teaching staff meetings, meetings with the students, selection of mentor teachers and coordination of their work, cooperation with module coordinators, proposing admission quotas, determining courses to be covered by the entrance exams, reporting on the study performance to the Dean for Academic Affairs and/or FC, and carrying out other tasks.

First Year Undergraduate Students by Region of Origin and Gender

::

Region of Origin

Regarding the region (city/county) of origin of the Croatian first-year students enrolling at FAZ, the majority of students comes from the City of Zagreb (60.4%), while number of students from the Zagrebačka (6.6%), Varaždinska (3.5%), Istarska (2.9%), Koprivničko-Križevačka (2.6%), Sisačko-Moslavačka (2.6%) and other counties is considerably lower. This regional distribution of enrolled students is similar to the last year.

The first-year FAZ students include five students from five cities in Bosnia and Herzegovina (1.18%), which is 12 less than in the previous academic year.

Gender

Considering gender, among the first year (N=423) female students are more numerous (59.1%) than male students (40.9%), and the percentages do not significantly differ for the higher study years. Compared to the previous academic year, the share of female students (55.3%) increased by 3.8 percent.

Secondary Education of the First-Year Students

Previous education and secondary education performance is a significant indicator of the quality of future students in higher education. The below table shows shares of secondary schools from which the first-year students graduated. The students secondary-school results are analysed and presented as averages.

The secondary-school graduates who enrolled at FAZ in academic year 2005-2006 came from 16 secondary schools. The majority graduated from grammar schools (49.9%) and agricultural school (21.3%). These are followed by graduates from nursing school (5.7%), chemistry school (5.4%), and engineering, food technology, veterinary, forestry, business, forest and other secondary schools whose students come in low percentages. Average result for the students from all 16 schools is 4.29. The average for the grammar school students is 4.36, and for agricultural school students 4.24.

First-year students by secondary education and average secondary school grades

Secondary school	Number of students	Share (%)	Average secondary school grade
Grammar school	211	49.9	4.36
Agricultural	90	21.3	4.24
Nursing	24	5.7	4.57
Chemistry	23	5.4	4.14
Electrical engineering	17	4.0	3.83
Food technology	14	3.3	3.87
Veterinary	13	3.1	4.45
Business	11	2.6	3.90
Forestry	3	0.7	4.66
Other*	17	4.0	3.64
Total/average**	423	100.0	4.29

* Other schools: civil engineering, applied arts, trade, road traffic, hotel management, teaching, graphical design.

** Weighted average

The data on secondary school from which the students graduated, and share of students from each school are rather steady, as confirmed by the data for the previous academic year. Again, grammar school and agricultural school graduates were the most numerous, but the share of the grammar-school graduates was somewhat lower (48.4%), and of agricultural-school graduates somewhat higher (27.4%). Percentages of graduates from other secondary schools differ only slightly from one year to another.

Compared to the previous academic year, the average grades of the future students from most of secondary schools are somewhat higher, so the total average is also higher (4.29 compared to 4.04).

Average Secondary-School Grades for the First-Year Students as per Undergraduate Study Programs

Data on performance of the first-year students in their secondary education were collected from the documentation kept by the FAZ students' admission service.

These data were used to tabulate the undergraduate studies in descending order of the average secondary-school grades of the FAZ first-year students.

The Landscape Architecture students (average grade 4.531) rank as the first, etc., and the students of three studies have the below-average grades. (The importance of the secondary-school grades and their comparison with the performance of the students after the first study year might be subject of another analysis.)

Average secondary-school grades for the first-year students as per undergraduate study programs, academic year 2005-2006

Rank	Undergraduate study	Average grade*
1.	Landscape Architecture	4.531
2.	Plant Protection	4.455
3.	Agricultural Economics	4.396
4.	Horticulture	4.354
5.	Animal Science	4.345
6.	Plant Science	4.307
7.	Agriecology	4.173
8.	Agricultural Engineering	4.144
9.	Organic Agriculture	4.063

* Weighted average

Type of Secondary Education ::

The same is true of the data on the type of secondary education completed by the first-year students presented by all the undergraduate study programs. These data show the highest enrolment of the grammar school graduates in Landscape Architecture (81%), and their significantly lower share in the Plant Protection study (27%). The agricultural school students account for the highest share in Plant Protection (40%) and Organic Agriculture undergraduate study program (37%). The business school has the most of its graduates in Agricultural Economics (8%), chemical school in Plant Protection (16%), general engineering and mechanical engineering schools in Agricultural Engineering (12%) and (10%), respectively, veterinary in Animal Science (14%), and the applied arts students opted (exclusively) for the Landscape Architecture undergraduate study program (12%).

Gender

The data on female and male population distribution by studies is also indicative, so the majority of students in Landscape Architecture (77%) are female, and students in Agricultural Engineering (62%) are male only.

2005-2006 Academic Year Graduates

During the reporting period, 132 students graduated from FAZ, which is 7 less compared to the previous academic year (139) and generally the lowest number during the last five years. The data for the five-year period are tabulated below, including the students who graduate according to both old and new program.

Number of graduated students from academic year 2001-2002 to academic year 2005-2006

Academic year	Study program		Total	Index
	to academic year 1996-1997	since academic year 1996-1997		
2005-2006	44	89	133	100.0
2004-2005	65	74	139	104.5
2003-2004	91	50	141	106.0
2002-2003	101	35	136	102.3
2001-2002	153	6	159	119.5

Old Study Program (in effect by the academic year 1996-1997)

During the academic year 2005-2006, 44 students graduated according to the old study program (effective until 1995-1996), most in the former Pomology, Viticulture and Enology major (13) and in Agronomy major (10).

Number of 2004-2005 graduates by major - study program in effect by the academic year 1996-1997

Major	Graduated
Pomology, Viticulture and Enology (HORT)	13
Agronomy (AGR)	10
Gardening and Landscape Architecture (GLA)	7
Plant Protection (PP)	5
Animal Husbandry (AH)	5
Agricultural Economics (AEC)	2
Soil Improvement (SI)	2
Agricultural Engineering (AEN)	0
Total	44

Compared to the previous academic year, it is 21 graduated engineers of agriculture less, which is logical.

New Study Program (in effect since the academic year 1996-1997)

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During the academic year 2005-2006, 88 students who enrolled to study according to the New Study Program effective since the academic year 1995-1996 (to be gradually phase out during the next four academic years) graduated, which is by 14 more than during the previous academic year; most of them graduated from Pomology, Viticulture and Enology (35), the major with the highest enrolment rates, than from Gardening (17) and Plant Protection (11) majors, etc.

Number of 2004-2005 graduates by majors - New Study Program in effect since the academic year 1996-1997

Major	Graduates
Pomology, Viticulture and Enology	35
Gardening	17
Plant Protection	11
Landscape Architecture*	10
Agricultural Economics	7
Animal Husbandry	4
Diary Science	3
Fisheries	1
Agronomy	1
Total	89

* Program

Field Trips

::

The FAZ field trips are organised in order for the students to learn about the Croatian natural resources and major production facilities, and to analyse field trip results and major production systems. The students usually travel by vehicles owned by FAZ (coach, minivan).

From September 2005 to June 2006, the FAZ students spent 104 days (74.1%) on field trips, of which 58 days (55.8%) during the summer semester (most trips in April and May), and 46 days (44.2%) during the winter semester. Compared to the previous academic year, the number of field trip days decreased by 35 (25.2%) because the University of Zagreb and the Ministry did not allocate the funds for this purpose. The FAZ field trips are organised for all three study programs and their majors.

Within the Botany course field trip, the students of all three study programs visited the areas with diverse flora. Landscape Architecture study particularly focused on indigenous and park flora, and Animal Science on grass flora. On their field trips the students visited a number of places in Croatia and the FAZ experiment stations, including the Center for Grasses at Mt. Medvednica, Jazbina Experiment Station for pomology, viticulture and enology, and Josip ban Jelačić, Prolom Hunting Grounds in Buzeti. The students also worked at larger farms, with fruit and grapevine growers, and winemakers in different regions.

The Animal Science students visited animal farms, fish farms and processing facilities in large agricultural and food producing companies. The Landscape Architecture students toured national parks and nature parks.

Undergraduate Studies Taught by the FAZ staff at Other Croatian Higher Education Institutions

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Besides their work at FAZ, some members of the FAZ staff teach at other faculties and universities and higher education institutions in Croatia and abroad. In Croatia, most lecturers teach within the framework of the education reform (the Bologna process) at a number of faculties of the University of Zagreb, Universities of Split, Osijek and Zadar, at the polytechnics at Knin and Požega, and abroad at the University of Mostar Faculty of Agriculture (Bosnia and Herzegovina), etc.

The FAZ professors participate as members of dissertation proposal evaluation commissions at other Croatian universities, in Bosnia and Herzegovina and Slovenia. Some lecturers from other faculties, although in small numbers, teach at FAZ particularly at the interfaculty study of Landscape Architecture. Some lecturers from other faculties of the University of Zagreb and other universities and institutions teach at FAZ postgraduate (doctoral) studies, and participate as members of dissertation proposal evaluation commissions, in higher rank appointment procedures, and the like.

Undergraduate, Graduate and Professional Study Programs in Croatia and Bosnia and Herzegovina Co-organized by FAZ and Other Institutions/Organisations

During the academic year, the FAZ professors were teaching at the undergraduate, graduate and professional studies coordinated or founded by FAZ, and were the visiting professors at other faculties and universities.

Undergraduate Study in Mediterranean Agriculture

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Mediterranean Agriculture Study Coordinator: Professor Nikola Mirošević, PhD; FAZ

Coordinator: Katja Žanić, PhD, research associate, Institute for Adriatic Crops and Karst Reclamation, Split

At its session of 27 January 2005 the FAZ FC brought a decision on collaboration between the University of Zagreb Faculty of Agriculture, University of Split, and the Institute for Adriatic Crops and Karst Reclamation on setting up and carrying out of an interuniversity undergraduate study in Mediterranean Agriculture in Split. An Agreement was signed on cooperation and a signing ceremony was held on 10 October 2005 in Split. The Agreement was signed by the Minister of Science, Education and Sports Assistant Professor Dragan Primorac, PhD, University of Zagreb Rector Professor Helena Jasna Mencer, PhD, University of Split Rector Professor Ivan Pavić, PhD, University of Zagreb Faculty of Agriculture Dean Professor Jasmina Havranek, PhD and Institute for Adriatic Crops and Karst Reclamation (IJKMK) Director Slavko Perica, PhD. This was the first day of teaching at the new study, and it started with Mathematics module.

FAZ proposed a the study program concept, method of implementation and development, namely the syllabus authored by FAZ, which provided the necessary teaching staff as well. The program focuses on human, natural and economic resources of the Croatian Mediterranean region. Horticulture, cattle breeding and agricultural economics are particularly highlighted. The facilities and administration of the study program is provided by the University of Split, entrance procedure for the first study year is determined by FAZ, graduation diplomas are issued jointly by the two Universities, and the graduation ceremonies for the bachelors will be held in Split. The Mediterranean Agriculture study is organised as the interuniversity undergraduate study at which some of the ground modules (mathematics, IT, chemistry, etc.) are thought by qualified teaching staff of the University of Split and University of Zagreb Faculty of Agriculture, while the modules belonging to the scientific field of biotechnical sciences will be instructed by the FAZ and IJKMK staff.

Thirty students enrolled in the first semester of the academic year 2005-2006, and 28 passed into the second semester. The study program is based on 22 mandatory and 15 elective modules.

Instructions in mandatory courses were held at the University of Split Faculty of Natural Sciences and Kinesiology, and in specialised modules at the IJKMK. The first semester included 6 mandatory modules (30 ECTS), same as the second semester. According to the teaching staff reports, students performance and involvement in the learning process, the students of the first generation of this undergraduate study have generally shown impressive interest and results.

The teaching process was organised in shifts, the students were set for tests, preliminary exams and seminars. The results were very good, so by the end of June 2006 the majority of students met the required standards. The studying methodology considerably relies on the e-learning system, and frequent tests. Over 80% of teaching material was available in written form.

As interviews with students indicate, the first study year of the Mediterranean Agriculture confirm that the education process needs to focus on individual students who will, taking into account the biodiversity and sustainable development specific for the Croatian karst and coastal area, find their own qualification profile.

Collaboration between the University of Zagreb Faculty of Agriculture (FAZ) and the University of Mostar Faculty of Agriculture (AFM) in Teaching and Scientific Research Area

FAZ Coordinator: Professor Milan Mesić, PhD

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The Agreement on Collaboration in Teaching and Scientific Research Area between FAZ and AFM was signed on 6 February 2006. The Agreement sets a framework for collaboration in creation of new curricula, participation of the FAZ staff in particular segments of the AFM teaching process, and participation of the young AFM staff members in work of respective FAZ departments. Pursuant to the study program changes based on the Bologna Declaration rules, at its 63rd session the Faculty Council of AFM accepted reorganisation of the university studies and introduced the 3+2+3 model. The reasons underlying such a decision were changes in the European education system and need to modernise the existing studies. The implemented reform, and introduction of undergraduate and graduate studies enable earlier graduation from the bachelor's studies and earlier employment, which is one of the objectives of the higher education reform in Europe. AFM proposed four undergraduate study programs in following majors:

(1) General; (2) Plant Science; (3) Zootechnics; and (4) Agricultural Economics.

Collaboration between the two Faculties of Agriculture is motivated by the desire to enable the Mostar students to gain higher education of adequate quality and future capacity building and independence of AFM.

Within this collaboration, 17 members of the FAZ teaching staff participated in the teaching activities at the AFM undergraduate studies during the academic year 2005-2006.

Professional Study in Karst Agriculture, Marko Marulić Polytechnics, Knin

::

Based upon the FC decision of 9 May 2005, the FAZ submitted to the Ministry its draft curriculum and syllabus for the Karst Agriculture study with majors: (1) Karst Cattle Breeding and (2) Plant Production. The draft was prepared by respective FAZ teaching staff. The curriculum and syllabus were approved and the Karst Agriculture study program at the Knin Polytechnics was launched in the academic year 2005-2006, with exclusive responsibility of FAZ.

The Karst Agriculture study program and its majors were established because of the need for the karst experts in Croatia and development of the karst agriculture and the entire karst rural region.

Having in mind specific characteristics of the karst areas, and aiming at expeditious development of agricultural and business sector in the region and staying of young experts in the country, special attention is paid to cattle breeding and plant production using the state-of-the-art solutions and respecting the environmental aspects of such production.

The professional study program ensures mastering of professional theoretical and specialised topics characteristic for a specific education profile.

The draft professional study program included the curriculum and syllabus for the three-year education of the students who earn 180 ECTS, and have an option of further education at professional studies in line with the Bologna Declaration.

During the first academic year, the Karst Cattle Breeding major had 15 modules, with 534 hours and Plant Production 12 modules with 402 hours of lectures, while 6 were the ground modules.

Postgraduate (Doctoral) Studies

Introduction ::

According to the Old Study Program, the FAZ had organised and conducted seven four-semester postgraduate studies, and most of them are still active. Late in 2002 and early in 2003, the National Council for Higher Education and the University of Zagreb Senate accredited three new postgraduate (doctoral) studies tailored to the ECTS credits system and the than Research and Higher Education Act. The postgraduate study programs are Plant Breeding and Genetics, coordinated by Professor Vinko Kozumplik, PhD; Animal Science, Dairy Science and Apiculture, coordinated by Professor Jasmina Havranek, PhD; and Fisheries, coordinated by Professor Tomislav Treer, PhD. The students are thus enabled to attend doctoral studies, and accumulate credit points for both curricular and extracurricular research activities,

and a number of elective courses. All these studies are still active, and some postgraduate students switched from the old to the new postgraduate (doctoral) studies.

The University of Zagreb Senate approved a new postgraduate study program in Agricultural Economics and forwarded it to the National Council for Higher Education for further procedure, namely national and international peer reviews. In the meantime, this doctoral study was granted the University (the Ministry) Guarantee², which enabled the start of this program.

Early in 2006, FAZ initiated launching of an interuniversity postgraduate study of Agricultural Sciences, which would encompass most scientific areas covered by FAZ (with exception of the field of agricultural economics whose representatives decided to remain independent within the earlier mentioned Agricultural Economics study). The University of Zagreb Senate approved the new postgraduate study program in which is fully tailored to the ECTS system and the new Research and Higher Education Act and it was granted the University Guarantee. The study was forwarded to the National Council for Higher Education for further procedure, namely national and international peer reviews, and based on the University Guarantee, the first generation of students enrolled and the teaching process started. The postgraduate study plan and important information are posted on the FAZ web site (www.agr.hr).

The University of Zagreb was also submitted the Fisheries postgraduate (doctoral) study program. Several postgraduate professional study programs are in preparation at FAZ.

Old Postgraduate Study Program ::

The old postgraduate study program is still active at FAZ with regard to exams and defence of master's theses:

Old postgraduate study program

Study	Coordinator
Agriecology	Professor Željko Vidaček, PhD
Plant Science	Professor Zvonko Mustapić, PhD
Agricultural Economics	Professor Tito Žimbrek, PhD
Phytomedicine	Professor Jasminka Igrc Barčić, PhD
Agricultural Engineering	Professor Josip Barčić, PhD
Animal Science	Professor Jasmina Havranek, PhD
Fisheries	Professor Tomislav Treer, PhD

Number of Students in Old and New Postgraduate Study Programs

During the academic year 2005-2006, 33 students enrolled in the second year according to the old postgraduate study program, and 18 students according to the new program (including some students who were approved extension of studies). No postgraduate students enrolled in the first year.

Postgraduate study enrolments in academic year 2005-2006

Program/Study	2nd year
Old program, total	33
of which	
Plant Science	12
Agriecology	10
Agricultural Economics	5
Phytomedicine	3
Animal Science	3
New program, total	18
of which	
Animal Science	12
Fisheries	5
Plant Breeding and Genetics	1
Total (old and new program)	51

² The University Guarantee enabled all the faculties and academies which applied with their university and professional postgraduate study programs to start working because of a time-consuming national and international peer review procedure.

Number of Students who Received Master's Degree

During the reporting period, 19 students (old program) received the master's degree in several scientific branches of the scientific field of agriculture. Compared to the previous period (22), number of masters of science is somewhat lower. Of nineteen students who successfully defended their theses, 16 graduated from FAZ, one from the University of Zagreb Faculty of Natural Sciences, one from the University of Zagreb Faculty of Veterinary Medicine, and one from the University of Split Naval Faculty. Eight of new masters of science work at the FAZ.

Number of postgraduates who received master's degree during the reporting period by scientific branches

Scientific branch	Graduated
Plant Science	6
Agricultural Economics	2
Animal Science	3
Fisheries	1
Agriecology	4
Phytomedicine	3
Total	19

An analysis of a five-year period reveals, as tabulated below, that most students who achieved the master's degree (28), which is 27.0 % of total number of graduates (N=104) studied at the Plant Science study program, than at Agricultural Economics (16 masters or 15.4%), Agriecology and Animal Science study programs with 15 masters of science or 14.4% each, etc..

Number of postgraduates who achieved master's degree during the five-year reporting period by scientific branches

Study/Reporting year.	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	Total number	%
Agriecology	5	2	1	3	4	15	14.4
Plant Science	4	6	6	6	6	28	27.0
Agricultural Economics	4	4	2	4	2	16	15.4
Phytomedicine	4	3	-	2	3	12	11.5
Agricultural Engineering	1	2	3	4	-	10	9.6
Animal Science	4	3	3	2	3	15	14.4
Fisheries	1	2	3	1	1	8	7.7
Total	23	22	18	22	19	104	100.0
Index*	121.1	115.8	94.7	115.8	100.0	-	-

*2005-2006=100.0

The five-year average is 20.8 (rounded off figure 21) masters of science a year. During the next period this number shall decrease since the former postgraduate study for master's degree shall be phased out and doctors of science which graduate from the postgraduate doctoral studies or future professional postgraduate studies shall take their place.

Dissertations

During the reporting period, 11 doctoral dissertations were defended from a number of scientific branches, which is by two dissertations less than in the previous reporting period. According to the available data, the five-year average is 10.6 dissertations, so the reporting period is slightly above the average.

Among the candidates that successfully defended their dissertations, five new doctors of science work at the FAZ. One candidate came from the Institute for Adriatic Crops and Karst Reclamation, Split, one was from Institute of Agriculture and Tourism, Poreč, and one from the Institute of Oceanography and Fisheries, Split. Three doctors are employed in business sector. Nine of new doctors of sciences have graduated and nine achieved their master's degree from FAZ. An average age of doctors of sciences is 39 years (ranging between 30 and 67 years of age). However, an average age of the doctors of sciences employed at the FAZ is 33 years (from 30 to 36 years of age).

The areas of research covered by the dissertations were agricultural economics (2), pomology (2), genetics (1), entomology (1), enology (1), animal husbandry (1), marine fisheries (1), agricultural marketing (1) and rural sociology (1).

Number of defended doctor's theses at FAZ during the five-year reporting period

Reporting year	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	Average*
Number of graduates	10	12	7	13	11	10.6
Index	90	109	64	118	100	96

An average for reporting years from 2001-2002 to 2005-2006

Project TEMPUS CD-JEP³ Agribusiness Higher Education Development

Acronym of the Project: AHEAD⁴ Project Code: CD-JEP 19009-2004

Project Contractor: Professor László Kárpáti, PhD; (Hungary)

Coordinator: Assistant Professor Josip Juračak, PhD (FAZ, Croatia)

Introduction ::

In 2005, intensive activities related to implementation of TEMPUS CD-JEP AHEAD Project started. The Project applied for funding from TEMPUS Program of the European Union (EU) in December 2004, and was approved mid-2005. The AHEAD Project has four partners - EU universities, University of Zagreb, and another eight partners from Croatia, i.e.:

- University of Debrecen, Hungary
- Wageningen University, The Netherlands
- University of Stuttgart, Germany
- Scottish Agricultural College, Scotland, UK
- University of Zagreb
- Ministry of Agriculture, Forestry and Water Management, Zagreb
- Institute for Adriatic Crops and Karst Reclamation, Split
- Institute of Agriculture and Tourism, Poreč
- Croatian Agricultural Extension Institute, Zagreb
- Agrokor d. d., Zagreb
- Croatian Chamber of the Economy, Zagreb
- Croatian Employers Association; Zagreb
- Croatian Society of Agricultural Economists, Zagreb.

The Project contractor is University of Debrecen, Hungary, and the Project Coordinator is University of Zagreb. The proposed total budget is EUR 531,698, consisting of TEMPUS grant of EUR 499,998 and the contribution of the consortium members of EUR 31.700. The Project duration is three years: from 1 September 2005 to 31 August 2008.

Specific objective of the AHEAD Project is curriculum development for agribusiness as well as food safety and quality in Croatia. The target curricula relate to three levels: undergraduate (BSc), graduate (MSc) and international MBA program in English. The main project activities include:

1. Development and improvement of the bachelor (BSc) training program for agribusiness (Agricultural Economics),
2. Establishing and development of the bachelor (BSc) training program for food safety and quality management as joint effort of the University of Zagreb Faculty of Agriculture and Faculty of Food Technology and Biotechnology,
3. Development and improvement of graduate (MSc) program for agribusiness (Agribusiness and Rural Development)
4. Establishing Executive MBA training at the University of Zagreb Faculty of Agriculture
5. Retraining in food safety and quality management and equipment procurement
6. Training need analysis in order to meet the requirements of the national agribusiness.

Permanent tasks during the Project implementation include effective dissemination of information on the Project, ensuring sustainability of outcomes, quality control and Project management.

³ CD-JEP is an acronym of Curriculum Development - Joint European Project.

⁴ CD-JEP is an acronym of Curriculum Development - Joint European Project.

According to the Project timetable enclosed to the Project application, the following activities were initiated by July 2006:

- Development and improvement of the bachelor (BSc) training program for agribusiness (Agricultural Economics),
- Establishing Executive MBA training at the University of Zagreb Faculty of Agriculture
- Retraining in food safety and quality management and equipment procurement.
- Training need analysis in order to meet the requirements of the national agribusiness.

**Development and Improvement
of Agribusiness Bachelor
(BSc) Program (Agricultural
Economics)** ::

Cooperation of professors from EU universities and the University of Zagreb as partners engaged on improvement of individual modules of the bachelor undergraduate study of Agricultural Economics. The activity covers most modules from this bachelor program, and possible introduction of new modules. This Project activity relies on direct contacts between the teaching staff and exchange of information through the internet-based communication platform for the AHEAD Project. Implementation of this activity should result in improvement of structure, contents, teaching techniques and teaching material for the target study. So far, the partners exchanged information on the current module structure and contents.

**Establishing Executive MBA
training at the FAZ** ::

The purpose of this activity is establishing of a pilot international executive master of business administration (MBA) training for professionals and managers in agribusiness and related professions. Several steps have already been taken, including:

- invitation to potential students;
- preparations and procurement of equipment and premises for the program; and
- procurement of literature for the students.

The teaching staff has already been engaged, mostly foreign professors.

In February 2006, 32 students were selected out of 228 applicants. The selection was carried out in two steps, based on the structure of applicants:

- English language knowledge and mental capacities were tested, and based on the test results, education, and years of work experience a group of 74 applicants was selected for interviews with the study coordinators;
- based on general impression gathered during interviews, 32 applicants were selected;
- 19 selected applicants are from the University of Zagreb institutions, and 13 from other institutions.

Another objective of the MBA training is retraining of the University of Zagreb staff for the program implementation, particularly their preparation to teach in English. Since objective of this TEMPUS program is to develop educational infrastructure, most of the students in this generation are the University of Zagreb staff. The curriculum is developed based on the principles of the International MBA Network, which supervises implementation and decides on accreditation of the program within the network. The modules are thought in the English language. Of 16 modules, 14 modules are coordinated by foreign, and two by Croatian lecturers.

By the end of June 2006, lectures were rendered in Introduction into Business English, Introduction into Company Reporting, Economics, Marketing, and European Studies: European Food Law. Seven ECTS points are earned for each course, and is organised in 20 hours of lectures and 85 hours of individual or group work. The costs for the first generation of 32 students are funded from the AHEAD Project. The majority of the students are engineers of agriculture, and the rest come from different professions, from economists to medical doctors. Nineteen students are the University of Zagreb staff members, who have been given a chance to learn and retrain for participation in the MBA program in the future.

Seventeen computers, desks, LCD projector and other equipment were purchased for the training classroom worth EUR 48,091.

Preparations of the classroom, the handbook and lectures for the next semester are under way.

**Retraining in Food Safety and
Quality Management and
Equipment Procurement**

::

Considering interest of the public and professional community in the food safety and quality and requirements thereon imposed by the planned accession of Croatia to EU, one of the activities within the AHEAD Project is retraining of the University of Zagreb staff in the field. The activity is performed through direct interaction of foreign and local scientists and professionals. The foreign partners have twice visited University of Zagreb establishing communication and exchange of information on the following topics:

- Modern bioanalytical methods in food analysis
- Present and future of GMOs
- Advanced toxicology
- Food regulation in the EU
- Quality assurance and management
- Traceability

The activity shall be completed in the second half of 2006 with final reports of partners on individual topics. The final reports shall indicate the cooperation results and future cooperation possibilities. The Project budget has money earmarked for procurement of modern literature. An electronic tongue for sensory evaluation worth EUR 30,000 was purchased for the University of Zagreb Faculty of Food Technology and Biotechnology.

Training Need Analysis in Order to Meet the Requirements of the National Agribusiness

Development of quality education in the field of agribusiness cannot be conceived and planned without an insight into the actual needs and requirements of this business sector. Within the project, the training need analysis (TNA) was initiated in order to examine the situation and demand for education of managers, professionals and executives in agribusiness.

A questionnaire was created and 430 respondents surveyed from the entire Croatian territory. Production and trade companies, state institutions and local self-government institutions, education and research institutions were encompassed. Questionnaire was disseminated and data collected in collaboration with the Project partners from Croatia.

Collected data were prepared for computer processing, and the final report on analysis results is being drafted. The results will be disseminated to all those involved in development and implementation of higher education in agribusiness.

SCIENTIFIC RESEARCH AND PROFESSIONAL ACTIVITIES

Introduction

More than one third of the FAZ full-time research staff (N=388) has doctor's degree (34.8%), and about one ninth has master's degree (11.6%). Compared to the previous year, number of researchers with doctor's degree is higher by six and with master's degree by five. During the four-year period (2003-2006) number of FAZ employees with doctor's degree increased by 30, and those with master's degree by 8.

Number of FAZ employees with doctor's/master's degree, 2003- 2006

Reporting year*	2003	2004	2005	2006
Doctor of sciences	105	122	129	135
Master of sciences	37	40	40	45

* as of 31 May of respective year

Inflow rates of junior researchers are favourable and they guarantee revival of scientific research at FAZ. In mid-2006, 56 members of staff had the status of junior researchers, and their number has increased by 13 new researchers during the last five-year period, so their number (N=56) somewhat exceeds one fourth (27%) of the total number of professors and teaching associates (N=210) at FAZ.

The FAZ teachers and researchers are involved in implementation of basic, development and applied research projects, and actively participating in professional collaboration. The basic research and development of new technologies are supported by the Ministry of Science, Education and Sport, and applied agricultural and related research is supported by the Ministry of Agriculture, namely by its Agricultural Research Council (ARC). Prolific professional collaboration has been established with different clients (institutions, state administration, business sector), and the FAZ researchers have participated in international development and applied research projects.

Projects Contracted with the Ministry of Science, Education and Sports

In 2002, a new three-year research period started for the projects funded by the Ministry. The applications were submitted for permanent research projects program, and the FAZ researchers were approved 58 scientific research projects in July 2002; additional four projects were approved in the meantime, so altogether 62 projects funded by the Ministry are presently in their final stage. On 18 July 2005, the Ministry decided to prolong funding of the ongoing 62 FAZ projects for another research year until July 2006, with possible further prolongation until the end of 2006.

Early in 2006, the Ministry called for applications for a new scientific research projects funding cycle according to the new and, compared to the previous period, changed conditions based on international experience. The project category is introduced according to the application rules, and merging encouraged of several scientific research projects into larger programs that have an advantage of being interdisciplinary and interregional. The applied

projects/programs undergo international peer review, criteria for primary researchers are more stringent, involvement of junior researchers is particularly valued, and the researcher's institution is demanded to approve the submitted project/program. By the deadline stipulated in the call for applications (10 March 2006), the FAZ researches applied with approximately 90 scientific research projects merged in some 20 programs. Some researchers and their projects are also engaged by other mainly higher education institutions in Croatia, while a number of researchers got involved on the FAZ programs. The applied projects/programs are currently in the peer review procedure (Croatian followed by international reviewers), and the application approval results are expected to be known late in 2006.

Projects Contracted with the Ministry of Agriculture, Forestry and Water Management

Since the Ministry of Agriculture has started funding applied research projects in agriculture and related scientific disciplines through its Agricultural Research Council (ARC) established in 1997-1998, and FAZ has launched its first project (Development of Farm Support Service Program, FSSP) funded from the World Bank loan proceeds, the FAZ primary researchers and their collaborators participated in 133 projects. Results of these research projects have found their application in agricultural practice, particularly on family farms, in projects implemented by national, regional and local administrations, in business sector, while the Ministry of Agriculture has used them to create the agricultural policy. The research results have also contributed to education of the FAZ students, additional learning by junior researchers and their involvement in scientific research and professional activities, and were used as source of information by the extension service officers at all levels, heads of agricultural and rural development offices, and businesses involved in agriculture and food production

Eleven ARC applied research studies are being carried out in the field of agriculture and fisheries. These are mostly two-year projects approved in the second half of 2004, which have been completed or have reached the final stage, and four new projects approved late in 2005. (List of ARC projects is attached to this Annual Report).

Projects Contracted with National and Regional Administration, Companies and Entrepreneurs

Specialised professional activities rendered by FAZ researchers on the basis of collaboration agreements include practical and extension services rendered to the national and regional authorities, businesses and institutions, entrepreneurs and other stakeholders and clients. This type of research focuses on resolving of different agricultural problems, for which the studies, project documentation and reports are prepared, supervisions conducted, surveys and monitoring systems set up, and analyses and other forms of professional services delivered.

Agreements signed by FAZ and departments, 2001-2002 to 2005-2006

Reporting year	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Number of agreements*	75	57	111	135	109
Index	100	76	148	180	145

* Acc. to data from FAZ registry book for the respective years

Altogether 109 such collaboration agreements have been concluded by individual FAZ departments, among them some on long-term basis. Changes in number of contracted projects during five reporting periods are shown in the table below.

According to the number of agreements, cooperation with the business sector and other users increased during the last three reporting years.

Junior Researchers

Fifty-six junior researchers were employed at FAZ as of 10 May 2006. In comparison with the previous reporting period, their number increased by one. Actually, 8 new junior researchers (6 female and 2 male) were employed, two junior researchers terminated their employment, and the difference in numbers is due to a change in status and appointment of junior researchers into the rank of assistant professors. Mean age of the junior researchers is about 30 years.

Junior researchers at FAZ* (number, age and gender)*, 2005-2006

Gender	Male	Female	Total
Number	26	30	56
Mean age	30.23	30.13	30.17

* as of 31 May 2006

The junior researchers were employed upon approval of the Ministry funding of respective projects. Among them, three junior researchers have doctor's, and 21 master's degree. Other junior researchers are graduate agriculture engineers (30), one biology teacher, and one psychology teacher.

Generally, during the five-year period the number of junior researchers increased.

Junior researchers at FAZ during the five-year period (2002-2006)

Year	2002	2003	2004	2005	2006
Number	43	41	41	55	56
Index	100.0	95.3	95.3	127.9	130.2

as of 31 May of respective year.

The junior researcher activities, which are crucial for successful educational and scientific research revival at FAZ, were coordinated by 47 professor/researchers.

Presentation and Dissemination of Research Results

All FAZ researchers responded to the Editorial Board invitation to submit reports on their professional activities during the reporting period.

The FAZ researchers publications/activities for the reporting periods from 2001-2002 to 2005-2006*

Publications/Reporting year	2001- 2002*	2002- 2003*	2003- 2004*	2004- 2005*	2005- 2006**	Average ***
Articles published in journals	142	239	189	347	426	269
Scientific journals	114	144	131	179	180	150
with international review	...	92	67	82	88	82****
other	...	52	64	97	92	76****
Technical journals	28	95	58	168	246	119
Papers published in proceedings from congresses and conferences	151	214	193	284	210	210
Published books	11	17	19	31	20	20
Studies	85	52	54	54	87	66
National projects	172	203	210	237	210	206
International projects	11	21	22	25	27	21
Conferences, specialised forums, workshops, etc.	80	82	48	65	67	68
Specialised lectures, product evaluation, appearance in public media	163	229	231	312	289	245
Additional scientific education	39	41	62	72	71	57

* FAZ Annual Report, Zagreb for respective year.

** Reports of the FAZ research staff as of 31 May 2006

*** Five-year average (2001-2002 - 2005-2006)

**** Four-year average (2002-2003- 2005-2006)

The researcher results are presented in several groups of scientific and technical publications: articles published in journals, papers published in proceedings from congresses/symposia (full or abstracts), books, completed projects, seminars, workshops, etc. A list of scientific and technical results by the FAZ departments is given in section 10 of the Annual Report in Croatian, while the English version of the report shows the summary results only.

The scientific papers published in journals are grouped as: (i) articles with international review, (ii) other scientific articles, and (iii) technical papers. During the last four reporting periods, when the publications were followed up, the FAZ researchers published on average 82 articles with international review and 76 other scientific articles a year. During the five-year period, an annual average is 119 published technical papers. During the reporting period, publishing rate for articles with international review (88) and other scientific articles (92) was slightly above the four-year average, and the number of technical papers (246) was considerably above average.

In percentages, of total number of articles published in journals in the reporting year 2005-2006 (426), the scientific articles with international review account for 20.7%, other scientific articles for 21.6%, and technical papers account for 57.7%. Considering the reporting periods, the number of papers in all categories is on significant increase. Relatively largest increase is in technical papers published in journals, by almost 50 % compared to the previous reporting year. The FAZ researchers published 20 books as authors and co-authors. Number of articles published in the proceedings (210) is somewhat lower than in the last reporting years, but still remains within an average. Numerous researchers were involved in development of specialised studies for different clients; 87 studies were finished, which is the highest number in the five-year period.

The scientific research and professional activities include project-related scientific research activities, funded generally by relevant ministries (the Ministry, the Ministry of Agriculture). During the analysed five-year period, participation of the FAZ researchers on such projects has been on permanent increase, save for the last year when it decreased but still remained above average. During the analysed period, the FAZ researchers coordinated 200 different projects a year on average. For example, during the reporting period 2005-2006, the researchers worked on 237 projects, 27 among them international. Number of international projects is on permanent increase, and during the analysed five-year period it increased 2.5 times.

Involvement in organisation of symposia and congresses, workshops, and studies (67) was intensive, particularly participation in technical lectures and product evaluations. Number of appearances in media, on TV and radio also increased, as well as number of articles and interviews in the press, and the like (289).

The FAZ researchers, mainly the younger ones, attended 71 retraining courses at Croatian and foreign institutions, which is similar to the last year (72).

Analysis of the above indicators of scientific and professional activities should take into consideration a fact that the number of researchers increased during the five-year period (37 new ones). If total scientific and technical production expressed in number of published papers were reduced to one researcher, the changes during the last four years⁵ are as tabulated below:

Articles published in journals and proceedings as per a researcher*

	2002-2003	2003-2004	2004-2005	2005-2006	Average**
Articles published in journals, total	1.30	0.99	1.65	1.93	1.47
of which					
- scientific papers with international review	0.50	0.35	0.39	0.40	0.41
- other papers	0.28	0.34	0.46	0.42	0.38
- technical papers	0.52	0.30	0.80	1.11	0.68
- Papers published in proceedings from congresses and conferences	1.16	1.01	1.35	0.95	1.12
Total	3.76	2.99	4.65	4.81	4.05
Number of researchers	184	191	210	221	202

* In addition to all the professors and teaching associates, the researchers include junior researchers (acc. to the data from FAZ Annual Reports, section: Organisation, subsection: Professors and Teaching Associates).

** 2002-2003 - 2005-2006

⁵ The first year (2002) is not included assuming realistically that, since that was the initial data collecting stage initiated for the first Annual Report, not all the papers were reported by the researchers as indicated by noticeable difference compared to the next reporting year (2003), particularly with regard to papers published in journals and proceedings. Additionally, the papers reported as published in journals for 2002 were not grouped as the articles with international review and other articles.

Although the numerically presented per capita overall scientific and technical production has been on increase (2005-2006/2002-2003 index is 128), which exceeds the increase in a number of researchers (index for researchers for the same period is 120), publishing of scientific articles with international review is constant, same as publishing of papers in proceedings from congresses and symposia (Croatian and international), while publishing of technical papers and to a certain degree of other scientific papers is on increase.

Numerical presentation of scientific and professional engagement certainly has its limitations because it does not refer to indicators of quality of papers, their rate of quoting in referenced databases, particularly for the indexed papers, etc. The National Science Awards received by the FAZ researchers for many years and other recognitions speak of notable presence of the FAZ professors and researchers in scientific and professional field of agriculture and related sciences in Croatia and in international community.

The data from the previous and the present Annual Report (section Promotional Activities) were used to make an overview of the FAZ researchers, including the junior researchers, who were presented the prestigious Annual National Science Award of the Republic of Croatia in the field of biotechnical sciences with reference to the research area in which the results were achieved.

Annual National Science Awards Presented to FAZ Researchers in the Field of Biotechnical Sciences During the Period 2001 to 2005

In 2001: ::

Professor Jasmina Lukač Havranek, PhD

Annual National Science Award - for significant achievements in the field of biotechnical sciences, particularly research into the quality of milk and dairy products

Professor Sulejman Redžepović, PhD

Annual National Science Award - in the field of biotechnical sciences, for application of scientific results of microbiological research in the field of soil biotechnology,

Ante Ivanković, MSc

Annual National Science Award, annual junior researchers award - in the field of biotechnological sciences for scientific research into the genetic traits of the farm animal breeds.

In 2002: ::

Professor Frano Tomić, PhD

National Science Award for life achievement - for overall scientific research in the field of biotechnical sciences.

Professor Ferdo Bašić, PhD

Annual National Science Award - for significant scientific achievement - for research into erosion under different tillage practices.

Professor Bogdan Cvjetković, PhD

Annual National Science Award - for scientific discovery of bacteria *Erwinia amylovora* and 31 pathogenic organisms on Croatian plants.

::

In 2003:

Professor Edi Maletić, PhD, Professor Ivan Pejić, PhD

Annual National Science Award - For scientific discovery of the most important indigenous Croatian grapevine cultivars

Sandi Orlić, MSc

Annual National Science Award, annual junior researchers award - for participation in discovery of *Saccharomyces paradoxus* yeast and its application in enology

In 2004: ::

Professor Zlatko Šatović, PhD

Annual National Science Award - for an important scientific achievement, in particular for development of statistical genomic method for preparation of genetic maps and analysis of biodiversity of flora

Professor Zvonimir Štafa, PhD

Annual National Science Award - for popularisation and promotion of biotechnical sciences, particularly for contribution to the plant science

In 2005: ::

Professor Ivan Kolak, PhD

Annual National Science Award - for application of scientific research results, particularly for use of own cultivars in production and marketing of the local seed.

EXPERIMENT STATIONS

Introduction

The FAZ experiment stations are used for teaching, scientific research and technical activities. Presently, FAZ has six experiment stations:

(1) Maksimir – 25 Svetošimunska St., Zagreb (in the FAZ neighbourhood); (2) Jazbina (142), Zagreb (a couple of kilometres from the FAZ campus); (3) Sljeme Center for Grasses at Mt. Medvednica; (4) Historical Gardens and Landscape Development Center, Dubrovnik, (5) Josip Ban Jelačić, Prolom state-owned hunting grounds III/29, Buzeti (some ten kilometres from the City of Glina), and (6) Šašinovečki Lug, Šašinovec near Sesvete, in the process of setting up (located some 15 km from the FAZ campus).

FAZ has also started setting up of the Bioengineering Research Center (ABIC), 104 Ferenčica, Zagreb, and the Agriculture and Food Institute to be established by FAZ and the former Tobacco Institute, Zagreb.

Experiment stations (1), (2) (3) and (4) have been managed and owned by the FAZ for a long time, while (5) and (6) are of a more recent date. Experiment station (5) is owned by the Republic of Croatia and turned over to FAZ based on the 30-year concession awarded in 2006. Registration of title for the experiment station (6) is under way.

FAZ is fully responsible for experiment stations (5) and (6), while other experiment stations are managed by the FAZ departments.

The experiment station at Maksimir (25 Svetošimunska St.) is managed by five departments, the one at Jazbina by two, and Sljeme (Mt. Medvednica) and Dubrovnik Centres are managed by one department each.

Experiment Stations Production Capacities (Land and Livestock)

Land and plantations, including

- 301.4 ha of plowland and gardens;
- 2.0 ha of orchards and 0.6 ha of fruit cultivar and clone collection;
- 8.5 ha of vineyards and 0.5 ha of rootstock mother vine collection;
- 1,000 ha of meadows;
- 1,257 ha of grassland (pastures) and 2.5 ha of micro trial grassland;
- 5,233 ha of forests.

Livestock (experimental animals), including:

Center for Grasses

- breeding cows (40) and calves, breeding heifers (10), bulls (2) (Charolais);
- breeding sheep (20) and lambs, and breeding rams (2) (Charolais);

Prolom Hunting Grounds

Game management: red deer (in transit), roe, boar, pheasant.

Game breeding according to the Hunting Master Plan: roe, boar, common hare, and pheasant.

FAZ /Department experiment stations – land area and management

Experiment station	Land area (ha)	Managed by (FAZ/Department)
Maksimir, total	21.5	
(a) Field production	9.0	Department of Field Crops
(b) Vegetable crops	2.0	Department of Vegetable Crops
(c) Plant breeding	5.0	Department of Plant Breeding, Genetics, Biometrics and Experimentation
(d) Seed production	4.5	Department of Seed Science and Technology
(e) Ornamental plants	1.0	Department of Ornamental Plants, Landscape Architecture and Garden Art
Sljeme Center	65.5	Department of Field Crops
Jazbina, total	11.6	
(a) Viticulture and Enology	9.0	Department of Viticulture and Enology
(b) Pomology	2.6	Department of Pomology
Dubrovnik Center	0	Department of Ornamental Plants, Landscape Architecture and Garden Art
Prolom Hunting Grounds	7,635.0	FAZ
Šašinovečki Lug	78.9	FAZ
Total	7,812.4	

Total fenced area of the Jazbina Experiment Station account for about 25 ha.

Experiment Stations Completely Managed by FAZ

**Šašinovečki Lug
Experiment Station – in process
of foundation**

::

Šašinovečki Lug Experiment Station was enlisted as a FAZ station in 2003, although the legal land title registration proceeding is still under way. The FAZ Dean Professor Jasmina Havranek, PhD initiated the process to recover this station that had once been owned by the Faculty, than by the Republic of Croatia, and finally used by the Croatian Animal Breeding Center Zagreb. The entire donation procedure was successfully completed on 4 April 2003, when the State Property Department of the Croatian Government brought a Decision according to which the State donates the agricultural land (plowland) with surface area of 78 ha, 86 acres and 54 m² and appurtenant buildings to FAZ, and FAZ undertakes to indemnify the Croatian Animal Breeding Center for the investments into the estate.

The title transfer procedure is under way.

**Josip Ban Jelačić
Experiment Station – Prolom
State Hunting Grounds (III/29)
– Buzeti**

Manager - Professor Zvonko Mustapić, PhD

::

On 25 June 1999, the Ministry of Agriculture provided a Decision on transfer of hunting rights at the state hunting grounds No. III/29 – Prolom (Hunting Grounds) to the FAZ. The Hunting Grounds area is 7,635 ha (forest 5,233 ha, plowland 200 ha, meadows 1,000 ha, and pastures 1,202 ha). The Hunting Grounds incorporation document envisages management of the following game: red deer – in transit, roe, boar, common hare and pheasant. The Hunting Master Plan envisages breeding of roe, boar, common hare and pheasant.

The City of Glina Council soon passed a Decision according to which the abandoned school in Buzeti (Prolom Hunting Grounds starting point) and the appurtenant cadastral plots were given to the FAZ for its use free of charge, which was an excellent background for launching of a teaching experiment station foundation project.

In its 1st ordinary session of 12 October 1999, the FAZ FC passed a Decision on Founding of the Josip Ban Jelačić Experiment Station at the Prolom State Hunting Grounds III/29 in Sisačko-Moslavačka County.

In May 2006, a 30-year concession agreement was concluded between FAZ and the Ministry of Agriculture for use of the Prolom Hunting Grounds.

Teaching Activities

During the reporting period, regular field classes were carried out in Hunting as an obligatory Animal Science course, and as an elective course under the FAZ curriculum for other students. The Student Hunting Group was very active. Its 25 members made regular visits to the Experiment Station together with their professors, and actively participated in numerous activities envisaged by the Hunting Master Plan.

Scientific Research

Research and observations for preparation of the diploma theses in hunting were carried out. Migration, life, reproduction, health status and genetic purity of all categories of game living at the hunting grounds are permanently observed. Special attention is paid to cross-breed hogs (household x wild) living at the hunting grounds in large numbers, which are after hunting thoroughly analysed for morphological-habitual characteristics, dressing percentage, and meat quality. Hog segregation by raising and sanitary hunting within the hunting contingent stipulated by the Hunting Master Plan is the primary technological measure that contributes to revitalisation of indigenous boar. All collected data are to be studied and published.

In May 2006, an exact micro trial with 12 forage crops in three replications was set up to determine their palatability for individual game species and categories. The trial was set up by the students, members of the Student Hunting Group, and their professors, and they shall be carrying out all observations, measurements and analyses.

During the last hunting management year, all activities envisaged in the Hunting Master Plan were carried out. Two new high stands and one observation point were built, and fifty feeding points and salt-licks prepared.

Experiment Stations Managed by the FAZ Departments

Maksimir Experiment Station

Field Production
Department of Field Crops
Maksimir Experiment Station

Manager – Assistant Professor
Dubravko Maćešić, PhD

::

Researchers and technical staff

Professor Zvonimir Štafa, PhD; Professor Boris Varga, PhD; Professor Zvonko Mustapić, PhD; Professor Ana Pospíšil, PhD; Professor Jasminka Butorac, PhD; Professor Milan Pospíšil, PhD; Assistant Professor Dubravko Maćešić, PhD; Assistant Professor Zlatko Svečnjak, PhD; Željko Jukić, PhD; Darko Uher, MSc; Josip Vinter, BSc; technical assistants Martin Mikić, Ivan Švajka, Denis Jurić, Snježana Župan, and farm hands Ivica Luketić and Miroslav Knežević.

Station Area

The Experiment Station consists of 7.5 ha of fenced land on the east side of the Svetošimunska St., divided into three units on which the field trials with corn, wheat and similar cultures, and soybean alternate.

In addition to this part of the Experiment Station, the Department researchers use about 1.5 ha of fenced area on the west side of the Svetošimunska St. for trials with sugar and stock beat, rape, small grains, flax, some forage crops, and occasionally with stubble crops.

The researchers from the Department of Field Crops, Center for Grasses use about 8 ha of land sown with grass on a part of the Experiment Station upstream from the confluence of the Bliznec and Štefanovec Brooks, opposite the New Hospital.

Equipment

Two modern tractors, John Deere (84 HP), and Fendt (60 HP), with attachable implements such as plow, disk harrow, harrow, cultivator, land plane are used for tillage. In addition to this equipment, the most frequently used pieces of machinery are sowing machine (four-row) for corn and soybean and combine for collecting of corn grains, while the sowing machine and combine for stubble cereals (for small plots) are shared with the Department of Plant Breeding, Genetics, Biometrics and Experimentation. The researchers also use numerous other pieces of machinery (cultivators, spraying machines, mowing machines, etc.).

The laboratory premises accommodate equipment for drying and shredding of plant material, grain counter, scales, and other pieces of small laboratory equipment necessary for preparation of the material for further analyses.

Projects

The scientific research is carried out within a number of projects, including:

A.- Projects funded by the Ministry:

Project: Sustainable Cropping Systems and Alternative Practices, covering the following topics:

- Change in yield components for corn, wheat, and soybean, due to different level of agricultural practices (tillage depth, fertilisation, pesticides, number of plants per unit of land area, and product quality assessment);
- Practices used in growing small grains for grain and forage (fertilisation, number of plants per unit of land area);
- Practices used in growing sugar rape and their impact on root quality.

Project: Growing Oil Crops in Sustainable Plant Production System

- Practices used in rape growing and selection of cultivars based on oil and meal quality

Project: Fodder Leguminous Plants

- Characteristics and productivity of genotypes of new fodder leguminous plants in forage conveyor
- Practices used in production of winter leguminous plants and pea forage and seed pea production (number of plants, moving dates, mixtures)
- Impact of seed bacterisation on yield and morphological characteristics of alfalfa

B. - Project funded by the Ministry of Agriculture:

Restoration of Flux Production and Flux Products

- Practices used in flux production and selection of cultivars for fibre and oil production

C.- Projects in cooperation with business sector

The projects implemented in cooperation with the business sector include production of small quantities of breeder seed of two soybean cultivars, one cultivar of winter fodder peas and crimson clover.

Graduation, Masters' and Dissertation Theses

Research activities supporting preparation of two dissertation theses are under way.

::

Vegetable Crops Department of Vegetable Crops Maksimir Experiment Station

Manager - Assistant Professor
Bruno Novak, PhD – Deputy
Department Head

Researchers and technical staff

Researchers: Professor Josip Borošić, PhD; Assistant Professor Bruno Novak, PhD; Assistant Professor Nina Toth, PhD; Ivanka Žutić, PhD; Božidar Benko, MSc.

Technical staff: Renata Baričević, BSc; Franka Cinfe, Damir Josip Petrinac, Robert Zdravec

Station Area

The Experiment Station surface area is 2.0 ha, and it consists of two units, a smaller area (garden) that accommodates plastic greenhouses, and a barrack for technical staff and the Experiment Station Manager, with practical work classroom for students and a shed for gardening equipment and tools. Three hydrants enable supply of irrigation water from the public water supply system. A larger part of the station (the so called field) has no hydrant in the vicinity, so irrigation is not possible, which limits carrying out of quality trials. This Experiment Station is mostly used by the Department of Field Crops.

In addition to the two existing heated greenhouses (128 m², 96 m²), the third greenhouse (130 m²) with floor heating was built at the smaller Station surface area (garden), and it is shared by the Department of Soil Amelioration and Department of Vegetable Crops. Other greenhouse facilities include unheated greenhouses of different surface areas (270 m², 72 m², 3 x 96 m²), high tunnels (54 m², 3 x 42 m²) and a frame (15 m²).

Equipment

The Department has IMT 533 tractor with rotavator and plastic mulch laying machine. The plowing, disk-harrowing and harrowing services are received from the Department of Field Crops. The small machinery available at the station includes: digging machine, sprinklers, rotavator, mowing machine, organic mulch cutter, manual sowing machine, drip irrigation systems. The practical work classroom is fitted with laboratory equipment

Teaching Activities

In the academic year 2005-2006, the Experiment Station, its garden, greenhouses, and the practical work classroom are used for exercises in Vegetable Crops, Plant Science (Gardening, Aromatic and Medicinal Plants – elective, Greenhouse Production), Landscape Architecture, and Plant Protection.

For exercises performed in the outdoor garden area, the greenhouses grow cultivars of vegetables, herbs, aromatic and medicinal plants, and vegetables for demonstration and carrying out of exercises in cultivation methods.

Projects

The research activities are carried out within the following projects:

- Soilless Culture of Tomato (funded by the Ministry). Impact of increase in salt content on tomato yield and quality in the unheated greenhouse was researched (in 2005), and research into impact of calcium concentration in nutrient solution on tomato yield and quality (in 2006)
- Modern Production of Medicinal Plants and Vegetables in the Zagreb County (funded by the Zagreb County). Analysis of medicinal plant (lavender, sage, fennel) was carried out at the Station, and the fennel transplants were prepared in spring 2006
- Ogulin Cabbage cv. Selection (funded by the City of Ogulin); partly carried out at the Station (selected plants seed production in tunnel and growing of transplants for progeny testing)
- Launching Commercial Production of Sweet Potato in Croatia (funded by the City of Zagreb Office for Agriculture and Forestry). The heated greenhouse produces seedlings for a number of locations in Croatia and tests sweet potato (*pomea batata*) production technologies (in the field/greenhouses);
- Production of aromatic and medicinal plants. Technology of growing mountain medicinal plants and seedlings of pelargonium was tested; in 2005, transplants were grown of researched plant species.

Research Funded by the Department:

- Application of Mycorrhiza for Lavender Cuttings Rooting in Different Substrata.
- Testing Dwarf Bean Cultivar Lines Chosen for Selection.
- Vranski 34 and Cerski Cabbage cv. Selection. The Station produces seeds of selected plants in isolation and grows transplants for progeny testing.
- Soilless Cucumber Growing in Pots

Graduation, Masters' and Dissertation Theses

The research studies supporting preparation of two dissertations and 10 graduation theses were carried out.

**Plant Breeding, Genetics
and Research Methodology
Department of Plant Breeding,
Genetics, Biometrics and
Experimentation
Maksimir Experiment Station**

Manager – Assistant Professor
Hrvoje Šarčević, PhD

::

Researchers and technical staff

Professor Vinko Kozumplik, PhD; Professor Ivan Pejić, PhD; Professor Marijana Barić, PhD; Professor Marija Pecina, PhD; Assistant Professor Jerko Gunjača, PhD; Assistant Professor Snježana Bolarić, PhD; Assistant Professor Snježana Kereša, PhD; Assistant Professor Hrvoje Šarčević, PhD; Aleš Vokurka, MSc; Toni Safner, MSc; Ivanka Habuš Jerčić, BSc; technical assistants Zlata Bošković, Dejan Škriljevečki, and farm hands Kata Lavrić, Fehim Purković and Ivo Dugandžija.

Station Area

The Experiment Station consists of 4.95 ha of fenced land, where field trials with maize, wheat and soybean have been carried out alternately.

Projects

Projects funded by the Ministry:

- Biotechnology and Accumulation of Superior Wheat Genes (*T. aestivum* L.) – Coordinator: Professor Marijana Barić, PhD;
- Recurrent Selection and Molecular Markers in Plant Breeding – Coordinator: Professor Vinko Kozumplik, PhD
- Application of Biometrics in Agricultural Research - Coordinator: Professor Marija Pecina, PhD
- Projects in cooperation with the business sector:
- Breeding Wheat – Coordinator: Professor Marijana Barić, PhD
- Breeding Soybean – Coordinator: Professor Ivan Pejić, PhD

Graduation, Masters' and Dissertation Theses

The research studies carried out at the Station were used to prepare and defend two graduation theses.

Research studies for preparation of a master's thesis and a graduation thesis on red clover are under way.

**Seed Production
Department of Seed Science
and Technology
Maksimir Experiment Station**

Manager - Professor Ivan Kolak,
PhD; Department Head

::

Researchers and technical staff

Professor Ivan Kolak PhD; Professor Zlatko Šatović PhD; Klaudija Carović, BSc, junior researcher – teaching assistant; Martina Grdiša, BSc - junior researcher; Boris Župan - technical assistant; Maja Župan Pour - technical assistant and Dragica Matasić – farm hand.

Outside collaborators working at the Experiment Station involved in the projects include: Professor Ines Vršek PhD; Vesna Židovec PhD; Ksenija Karlović, MSc – all from the Department of Ornamental Plants, Landscape Architecture and Garden Art.

Station Area

Experiment Station consists of:

- 1.5 ha of fenced land divided into three-crop production (for cultivar accession, accession of seed from the Croatian Bank of Plant Genes, breeding trials on cereals and grain legumes).
- 0.5 ha of land by the fenced land. The practical work area is divided into lots for all types of field crops, vegetables, medicinal, aromatic and honey plants where students learn about seeds, planting material, and commercial cultivars.
- 0.5 ha of fenced land for medicinal, aromatic and honey plants, annual and perennial species, trials with these species, cultivars, populations, bank of plant genes, and the like. The area is used for implementation of the ARC project From Seed to GMO-Free Product, and the Ministry project Croatian Bank of Plant Genes (CBPG) – accession, experiments for accession characteristics checking and trials. The area is fitted with the drip irrigation system.

- 2.0 ha of unfenced land for sustainable selection and reproduction of different field crops for practical work with students. The surface is rather heterogeneous (alluvial soil and gravel to the surface) and needs improvement.

Equipment

The Department has lab equipment for cleaning, calibration, protection and packing of smaller or larger seed specimens. The funds were raised for the Croatian Bank of Plant Genes (CBPG) project and for the central storage facility for storing of seed and planting material operating at 0 to 5°C (the so called short-time storage up to 20 years). The Department has smaller cooling stores for seed sample accessions, the PCR thermocycler and electrophoresis equipment.

Projects

A. Projects funded by the Ministry:

- Croatian Bank of Plant Genes (CBPG); strategic project
- Genetic Variability of Medicinal and Aromatic Plants

B. ARC projects

- From Seed to GMO-Free Products

C. Seed production for agricultural business sector.

Graduation, Masters' and Dissertation Theses

Research studies supporting preparation of two dissertations and one master's thesis and a number of graduation theses are under way.

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Researchers: Professor Ines Vršek, PhD; Assistant Professor Vesna Židovec, PhD; Ksenija Karlović, MSc; Sanja Morić, MSc and Miroslav Poje, BSc.

The Station has neither full-time technical staff nor gardeners; necessary hands are employed on part-time basis.

Station Area

The Experiment Station comprises

- 0.5 ha of fenced land is used for trials for introduction of wild species into the horticulture and for student trials. The area accommodates two unheated plastic greenhouses, one with production benches. The plastic greenhouses are used to conduct trials with potted plants and other species that demand a greenhouse environment for production.
- 0.5 ha of fenced land where trials are conducted with spineless bucher's broom growing for commercial production. (Part of the area is given to the Department of Plant Pathology for its use.)

Equipment

The field trials are carried out with a motor cultivator and hand tools, and tractors and attachable implements are rented.

Projects

- Project: Protection of *Ruscus hypoglossum* L. through Cultivation, funded by the Ministry, cofunded by the City of Samobor, City of Zagreb and Zagreb County The project objectives are to research into technology of spineless bucher's broom growing, determine population size in natural habitats, collect and store seed material, and introduce the species into the commercial production thus protecting the plant in its natural habitats.

Ornamental Plants
Department of Ornamental
Plants, Landscape Architecture
and Garden Art
Maksimir Experiment Station
 Manager - Professor Ines Vršek, PhD

- Project: Sweet violet (*Viola odorata* L.) Production Technology, funded by the Ministry of Agriculture. The project objectives are to evaluate introduced cultivars of sweet violet, analyses morphological diversity of wild population of sweet violet, grow wild population and introduced cultivars in open and unheated greenhouse environment, monitor development phenophases, determine of technological procedures by which blooming prior to the natural date is achieved.

Graduation, Masters' and Dissertation Theses

The research studies necessary for preparation of eight graduation theses are under way.

Other

The Station is growing plant material for the Department of Seed Science and Technology and Department of Plant Pathology, and Department of Plant Nutrition.

Jazbina Experiment Station

**Viticulture and Enology
Department of Viticulture and
Enology
Jazbina Experiment Station**

Manager – Professor Bernard
Kozina, PhD

::

Researchers and technical staff: The Experiment Station is composed of several teams of researchers and technical staff from the Department. Because of the nature, scope and importance of the research conducted at the Station, the staff of the Department of Microbiology and Department of Plant Breeding, Genetics, Biometrics and Experimentation is also involved on the teams, together with the researchers from the Department of Biology, Faculty of Natural Sciences, University of Zagreb and Department of Pharmacology, Medical School, University of Split.

Station Area

The Experiment Station has:

- about 8.5 ha of vineyards with a number of different grapevine cultivars; 1 ha was planted during 2005; and
- 0.5 ha of rootstock mother vine collection.

The Experiment Station also encompasses the buildings and farm structures that accommodate offices and laboratories, a library, a classroom, a small or experimental cellar, a large or main cellar, facilities for vinification, wine maturation, stabilisation and bottling of wine, cooled bottle storage, and machinery and equipment shed with a workshop. Two new structures – a barrack and a shed with an old Croatian winepress, have been erected. The finishing works on these structures are underway.

Equipment

Performance of numerous and often varying research activities has required different equipment that has gradually been procured by the Department during the last ten years with support of the FAZ. In 2005, within a framework of a project approved by the City of Zagreb Bureau for Agriculture and Forestry, new devices and equipment were procured, such as HPLC, spectrophotometer, while the Department invested into the gas chromatograph with mass detector which enabled opening of a laboratory for grapes, unfermented grape juice (must) and wine, capable of all analytical operations to be performed at the highest scientific research level. Equipment used for maintenance of the vineyards and implementation of viticultural technology and technological research (two FIAT New Holland tractors) with necessary implements is tailored to the state-of-the-art concept of wine production under the given conditions. Equipment in both the small experimental and the large or main cellar, including the vinification equipment, is presently well provisioned and completely suitable for different research efforts in wine production, maturation, stabilisation and bottling of wine. The mini tanks and temperature control system for the experimental cellar have been procured with significant support of the Department of Microbiology. In 2005, a modern filtration system was purchased for the large cellar, while the small or experimental cellar was fitted with sparkling wine production processing line. Since the plan is to produce different types of special harvest

wines, procurement of additional equipment (tangential filter) is planned to complete the wine-production processing line. Also, the laboratories for ampelometric research and the wine laboratory will be gradually equipped.

Projects

Due to the above capacities, the Experiment Station has been a focal point for numerous Ministry and ARC (Ministry of Agriculture) supported projects, some of them interdisciplinary:

A. Projects funded by the Ministry:

- Ampelographic and Genetic Evaluation of Croatia Native Grape Varieties
- Grapevine Solarization (technological project).

B. Projects funded by the Ministry of Agriculture:

- Genetic Identification and Protection of Autochthonous Grapevine Varieties
- Deacidification of Wines from Autochthonous and Domesticated Cultivars
- Control of Grapevine Phytoplasmosis in the Republic of Croatia
- Selection of Autochthonous Yeasts from Croatian Wine-Producing Regions
- Wines from Indigenous Cultivars of the Island of Hvar

New projects are in preparation which are planned to apply for co-funding by the Ministry and the Ministry of Agriculture, and the research studies will be performed, completely or in part, at the Station.

The FAZ Department of Microbiology uses this Experiment Station to carry out experiments with selection of indigenous *Saccharomyces cerevisiae* and *Saccharomyces paradoxus* strains.

Graduation, Masters' and Dissertation Theses

The results of the above projects and the research studies conducted at the Department are regularly used for preparation of a number of graduation and master's theses, and dissertations.

Fruit Production Department of Pomology Jazbina Experiment Station

Manager - Professor Zlatko Čmelik
PhD – Department Head

::

Researchers and technical staff: Professor Zlatko Čmelik, PhD; Professor Nikola Pavičić, PhD; Assistant Professor Đani Benčić, PhD; Assistant Professor Tomislav Jemrić, PhD; Boris Duralija, PhD; Zoran Šindrak PhD; Jasmina Družić Orlić, MSc (junior researcher), Martina Skendrović, BSc (junior assistant) and Ivan Kolić (farm hand).

Station Area

The Experiment Station includes 2.6 ha in fruit plantations, wherefrom:

- about 2.0 ha under new apple and pear plantation (planted in spring 2002);
- 0.1 ha under collection of about 100 apple cultivars and clones;
- 0.2 ha under trial with the plum rootstocks and cultivars and a collection of plum cultivars; and
- 0.2 ha under trial with different cherry rootstocks and collection of cherry cultivars.
- 0.1 ha under plum cultivar trial.

The plantations should expand in the future so that the total surface area with fruit trees will be about 5 ha.

Equipment

Department of Pomology owns only small machinery (motor cultivator, back-pack sprayer, mowing machine), so it must rely on major equipment support from other departments.

Projects

- Ecological Evaluation of New Cherry Cultivars (funded by the Ministry)
- Revitalisation of Plum Production (ARC - the Ministry of Agriculture)

Graduation, Masters' and Dissertation Theses

Research studies supporting several graduation theses are performed at the Experiment Station..

Experiment Centers

Center for Grasses, Sljeme 1, Mt. Medvednica Department of Field Crops

Manager - Professor Mladen
Knežević, PhD

::

Researchers, technical and support staff: Professor Mladen Knežević, PhD; Assistant Professor Josip Leto, PhD; Marina Vranić (Pavlak), PhD; Goran Perčulija, MSc and Krešimir Bošnjak, MSc; Ivan Kendelić, technical assistants; Ivana Matić, BscChem, staff associates; Hrvoje Kutnjak, BABiol, junior researcher; hands: Željko Brlobaš, Mladen Jurina, Dragutin Dupelj and Zlatko Landripet. Additionally, the Center for Grasses employs Irena Grbić, administrator; Zvonko Božičević, janitor; Mirjana Božičević, housekeeper.

Station Area

The Experiment Station has about 55 ha of agricultural land under natural and sown grassland; some 30 ha is confined with fixed electrical fence totalling over 16 km in length. These fields are used as pastures.

Micro trials are set up on an additional 2.5 ha of grassland. The Center is also using 8 ha of land in Svetošimunska St., thus the Center for Grasses uses 65.5 ha of land.

Facilities

The structures belonging to the Experiment Station include: (1) a teaching and laboratory building (ground plan area 850 m²) consisting of one classroom for 40 students, a chemical laboratory for forage analysis, five researcher offices, a reception office, and auxiliary premises (canteen, kitchen, boiler room, garage, etc.); (2) an experimental cattle stable with hay-barn (ground plan area 1,300 m²), capacity 60 cows; (3) an experimental sheep stable (ground plan area 130 m²), capacity 60-70 sheep; (4) a reconstructed multipurpose stable (cattle boxes, six stalls, machinery shed, etc.); (5) a dormitory with premises for interns (five bedrooms) and janitor's apartment (ground floor).

Equipment

In its scientific, research and teaching activities, the Center uses modern field and laboratory equipment. The field equipment includes three tractors (John Deere 115 HP, Zetor 90 HP and Styre 75 HP), machinery for forage harvesting and conservation (front rotary mower, rotary rake, rotary tedder, baler for large round bales, baler for small square bales, wrapper for large round bales), two sowing machines for direct sowing of grass and clover (John Deere and Vredo), an automatic sowing machine for trial plots (Wintersteiger). The Center also has all attachments and small machinery for trials tillage, mowing of plots, etc. The Center laboratory equipment includes: NIRS roughage analyser with software, protein analyser, fat analyser, fodder degradability analyser (gas production system by CONE), freeze-dryer, plant growth cabinet, mobile lab set for water and soil analysis, laser distance measurer, altimeters, scanning mirror stereoscope, etc.

The Center is also equipped with eight computers and supporting software for interpretation of satellite images and statistical data processing.

Livestock

For research on pastures and forage evaluation, the Center uses experimentation animals: about forty breeding cows (Charolais) and corresponding number of calves, ten breeding heifers (Charolais), two bulls (Charolais), about 20 breeding sheep and lambs, and two breeding rams (Charolais). All the animals are entered into the breeding register of the Croatian Cattle Breeding Center.

Core Activities of the Centre for Grasses:

- lectures (undergraduate/graduate), students' practical work, graduation theses
- scientific research, including development of projects, publishing of scientific articles and technical papers, master's theses and doctoral dissertations
- presentations and forums and thematic forums,
- Centre's production and collaboration with business sector and family farms,
- regular annual activities at the Center for Grasses.

Teaching

Theory and practice within the old undergraduate and postgraduate course in Grass Growing. The Center has facilities for field classes in Animal Science, Cattle Breeding and Sheep Breeding. During the reporting period, the Sljeme Center was also used by the Faculty of Veterinary Medicine of the University of Zagreb.

Students' Practical Work

In 2005, students performed their practical work during the entire growing season (May to October), in time intervals determined by subject research methodology.

Graduation Theses

In academic year 2005-2006, the Sljeme Center proposed six topics for graduation theses.

Projects

During the reporting period, one scientific research project was carried out at the Sljeme Center:

- Sustainable Management Systems of Natural Fodder Resources, funded by Ministry

One application is in procedure for a scientific program and two scientific projects for the research period 2006-2009:

Scientific program: Sustainable Management Systems of Natural Fodder Resources,
Coordinator: Professor Mladen Knežević, PhD;

Scientific Projects:

- Environmentally Sound Management of Organic Fertilizers in Feed Production -
Coordinator: Professor Mladen Knežević, PhD;
- Evaluation of Sustainable Feed Production Systems for Mountain Regions - Coordinator:
Assistant Professor Josip Leto, PhD.

Published Scientific Articles and Technical Papers

During the period 2005-2006, members of the Sljeme Center staff published numerous articles in journals and papers in proceedings from different congresses and conferences, a number of popular articles and had several appearances in public media.

Masters' and Dissertation Theses

Two master's theses were prepared and subsequently defended on the bases of research conducted at the Center for Grasses, while the procedure for two dissertations is under way.

Public Relations and Thematic Forums

The Center hosted numerous groups of farmers, their associations, children, students, business partners, foreign delegations, and other visitors (more than 753).

Centre's Production and Collaboration with Business Sector and Family Farms

To meet its own family farms' needs, the Sljeme Center produced 9 bulls and 17 breeding cows (Charolais) during the period 2005-2006. Some animals were sold at auction, and others were kept to increase/replace the Center breeding stock. The Center has also grown silage on a new 8 hectares large plot in Dubrava for its own use.

**Historical Gardens and
Landscape Development
Center, Dubrovnik
Department of Ornamental
Plants, Landscape Architecture
and Garden Art**

Manager - Professor Branka
Aničić, PhD;

::

Employee: - Nikolina Kapović, BSc - junior researcher

Outside collaborator: Bruno Šišić, PhD (landscape architecture)

Historical Gardens and Landscape Development Center, Dubrovnik (Dubrovnik Center) was founded in February 1982 under the sponsorship of the then Faculty of Agricultural Sciences (now FAZ). It started with two furnished rooms (floor area 80 m²) at the Inter-University Center (IUC) building, filled with documentation on historical gardens and landscapes collected during thirty-five years.

On 6 December 1991, the Dubrovnik Center was demolished and burned as Dubrovnik was shelled during the war. However, it was reconstructed and fitted with basic equipment from donations in 1997. The Dubrovnik Center is now located in the same building, repaired since the war and managed by the International Center of Croatian Universities (ICCU). The Dubrovnik Center occupies a furnished 20 m² room.

The founder and manager of the Dubrovnik Center until its destruction in 1991, and the person who undertook its reconstruction and managed it since that date is Bruno Šišić, PhD, Landscape Architect (senior research associate). The Dubrovnik Center particularly focuses on the current issues of protection and evaluation of the historical gardens and segments of cultural landscape, making its results available to the City of Dubrovnik administration, and Ministry of Culture (Dubrovnik Department of the National Trust)

Scientific Research and Other Activities

The Dubrovnik Center staff participated in congresses and conferences and their papers and abstracts were published in the proceedings, they published books and studies, and implemented projects for the business sector and local, regional and national administration, prepared book presentations, lectures, product evaluations, appeared in media, etc.

PUBLISHING, LIBRARIES AND IT ACTIVITIES

Publishing

Agriculturae Conspectus Scientificus (ACS)

ISSN 1331-7776 (online)

ISSN 1331-7768 (printed)

www.agr.hr/smotra

::

Editor-in-Chief: Professor Zlatko Šatović, PhD

Scientific Editors: Ino Čurik (Animal Science), Zlatko Šatović (Plant Science)

Editorial Board: Zdeněk Adámek, Czech Republic; Josip Borošić, Croatia; Stefanka Hadžipećova, Macedonia; Rainer Haas, Austria; Jasminka Igrc Barčić, Croatia; Branka Javornik, Slovenia; Ivan Jurić, Croatia; Miroslav Kapš, Croatia; Jasminka Karoglan Kontić, Croatia; Ivica Kisić, Croatia; Damir Kovačić, Croatia; József Kiss, Hungary; Josef Kozák, Czech Republic; Ivan Pejić, Croatia; Enrico Peterlunger, Italy; Carl A. Pinkert, USA; Zed Rengel, Australia; Johann Sölkner, Austria; Zlatko Svečnjak, Croatia; Tomislav Treer, Croatia

Copy Editor: Dragan Tupajić

English Language Editor: Marija Jug-Dujaković

Changes in Editorial Board

At its session of 9 May 2005, the FAZ FC brought a decision that ACS Editor-in-Chief Professor Ferdo Bašić, PhD shall be replaced by Professor Zlatko Šatović, PhD. A takeover was carried out in May 2005.

A new Editorial Board was convened consisting of 10 members from the Faculty of Agriculture of the University of Zagreb and, for the first time, 10 international members. The Editorial Board consists of an Editor-in-Chief who is also the Scientific Editor for Plant Science, a Scientific Editor for Animal Science, 20 Board members, a Copy Editor and an English Language Editor.

ACS Publishing

The last 2004 issue was published in June 2005. This lagging was primarily due to an insufficient number of submitted papers. Since 2004, ACS has been published in the English language, which caused a considerable loss of interest for participation in ACS among the Croatian scientists.

The Editorial Board members intensified their effort to encourage authors to submit their contributions to ACS, which resulted in increased interest of scientists. Four issues were prepared and edited during the first quarter of 2006, and 2005 activities were concluded.

The number of pages published in 2005 was 142 (Vol. 70). Twenty papers were published, of which 12 by Croatian and 8 by international authors. Forty-three reviewers, 27 Croatian and 16 international, were engaged to evaluate the submitted papers.

The ACS web site is updated on regular basis so the journal is freely accessible at www.agr.hr/smotra. The papers are also accessible at the Portal of Scientific Journals of Croatia - Hrčak (hrcak.srce.hr).

Reporting, Exchange and Other Activities

Secondary international sources in which the papers from the ACS journal are indexed include: (1) ASFA: Aquatic Science and Fisheries Abstracts, CSA, Bethesda, USA; (2) Biological Abstracts, Thomson Scientific, Alexandria, USA; (3) BIOSIS Previews, Thomson Scientific, Alexandria, USA; (4) CAB Abstracts, CAB International, Oxon, Great Britain; (5) ELSEVIER / GEO Abstracts, Norwich, Great Britain.

FAZ distributes ACS to 158 institutions from which it receives, in exchange, 90 journals for the Central Agricultural Library (including monographs, annual reports, brochures, etc.).

The following activities should also be mentioned: (1) International promotional activities which resulted in increase in number of submittals for the journal. (2) Communication with authors, reviewers, English Language Editor and Copy Editor by electronic mail. All the papers are evaluated by two reviewers, one international as minimum, and language edited. When the layout is prepared, the papers are returned to the authors for their proof-reading. (3) The Guideline for Reviewers was prepared; (4) The Rules on Editing and Publication of ACS were drafted and approved by the FAZ FC on 10 April 2006; (5) Numerous topical issues were agreed on that will contain papers presented at the future scientific congresses and symposia. (6) In its 29th session in November 2005, the FAZ FC, the ACS editor, adopted the Editorial Board proposal for financial support to the ACS International Editorial Board in 2006.

Journal of Central European Agriculture (JCEA)

ISSN 1332-9049 (online)

www.agr.hr/jcea

::

Editor-in-Chief: Professor Nikola Kezić, PhD

Publications

In 2005, four issues of JCEA were published; 109 scientific papers were submitted and 88 of them published. The JCA Editorial Board for 2005 was the Bulgarian Editorial Board. The annual meeting of the Editorial Board was held in Plovdiv (Bulgaria) on 20-21 October, during the conference State-of-the-art and Problems of Agricultural Science and Education (Jubilee scientific conference with international participation). The meeting decided that the Editorial Board for 2006 will be Croatian.

Publications in 2005

Year/Volume	2005 (Vol 6)
Issues	4
Articles received	109
Articles Published	88
Pages	640

Revenues

The Publishing Committee of the Ministry approved the funds for payments to the Editorial Board members. FAZ agreed to cover travelling expenses for the annual meeting of the JCEA Editorial Board in Plovdiv (Bulgaria).

Libraries

Central Agricultural Library (CAL)

Head Librarian: Vjekoslava Bešlaj,
B.A.

::

Being the central institution of the sort in Croatia, the Central Agricultural Library took over a large stock of books from the department reference libraries which moved to new premises. The received stock was processed and made available to users. The CAL depository was moved to new premises, but the problem of inadequate space has still not been resolved. The old, valuable and rare manuscripts needed to be adequately preserved and protected from degradation.

The Ministry enabled access to international on-line journals, and FAZ subscribed to 20 international and 30 Croatian printed journals.

The CAL received 1,200 copies of new publications through donations and exchange for the FAZ publications, or from FAO (serial publications).

Within the TEMPUS SCM Project A Model of the University of Zagreb Library System, coordinated by the National and University Library, Vjekoslava Bešlaj, BA, the Head Librarian, made a technical trip to the National and University Library of Finland in September 2005. The Project aims at setting up of a functional model and organisation of the University of Zagreb library system which would integrate the department, institute, and faculty libraries into an open library network system.

The CAL has not resolved its long-standing problem of insufficient number of book copies per student and inadequate working conditions (small premises, outdated hardware, etc.), which has become even more pressing with implementation of the Bologna process. The new educational system demands much better library standards because the students are expected to work individually, the seminar paper load increased, so the students ask for more attention from the library staff and their help in finding required literature on the internet or from similar libraries. As regards the students' demand on the library stock, no significant changes have been noticed, but changes are expected in the future, during the exam periods and in the next academic year, particularly after the graduate study program starts in two years time. Two new doctoral and a number of professional studies (in preparation) are expected to incur an additional load on the library.

IT Activities

FAZ Web Site Editorial Board

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Editor-in-Chief – Professor Marija Pecina, PhD

The FAZ Web Site Editorial Board was selected in 2003. Since 29 June 2005, the Editorial Board members have been: Professor Marija Pecina, PhD, Editor-in-Chief; Professor Jasmina Havranek, PhD, Dean; Professor Vesna Pavić, PhD, Dean for Academic Affairs; Professor Tito Žimbek, PhD, Dean for Scientific Affairs; Professor Zlatko Šatović, PhD, member; Professor Sanja Sikora, PhD, member; Professor Ivan Pejić, PhD, Dean for International Relations, member; Marko Kovačić, students' representative, member; Dragan Tupajić, web-designer; Davor Bevanda, web-master, and Usama Kalit, system-administrator.

The FAZ web-site was created in March 2004. It is regularly updated and FAZ news are posted. The remarks on user interface and the web site contents are considered seriously.

Special attention has been paid to reporting on the Bologna process and related educational reforms. Information is given on reform of the study programs and the FAZ admission policy. Details on new undergraduate, graduate and postgraduate programs and the admission information are posted on the web site.

Higher Education Management Information System (HEMIS) at FAZ

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One of major activities within the process of changes and reforms in education is introduction of the Higher Education Management Information System (HEMIS). FAZ was included in the HEMIS on the basis of the Ministry decision of 10 May 2004.

The HEMIS Implementation Board members are: Professor Vesna Pavić, PhD, Dean for Academic Affairs; Professor Vjekoslav Par, PhD, FAZ HEMIS Coordinator, and Davor Bevanda, Deputy Coordinator.

In line with the operating plan for HEMIS implementation at FAZ, responsible persons were determined for coordination and performance of relevant activities (coordinators, human resources, administration, department administrators, etc.). Currently, student data are being entered and updated for the academic year 2005-2006, and preparations made for the academic year 2006-2007.

STUDENTS' ORGANISATION AND ACTIVITIES

FAZ Student Assembly Chapter

Chapter President: Mislav Banek (also the President of the Student Assembly of the University of Zagreb)

Vice-President: Ana Radošević

The FAZ Student Assembly Chapter participated in several events:

- Organisation of Freshmen Night
A freshmen night was organised together with the Faculty of Graphic Arts, Teacher Academy and Faculty of Textile Technology at a disco club The Best in Zagreb, the guest singer was Mate Mišo Kovač, and the event was attended by some two thousand students.
- Organisation of the 2nd Students' Futsal Cup
The futsal (indoor football) cup was held on artificial grass at Zagreb Fair and Šalata Sport and Recreation Center; 64 students' teams participated.
- Organisation of the 5th Students' Harmony Singing Group Festival
Organised in cooperation with the University of Zagreb Student Assembly. The festival venue was the Croatian Music Institute in Zagreb, and eight groups took part.
- Co-Organisation of Student Exchange together with the FAZ International Relations Office.
- Assistance in organisation of different sport events at FAZ.

IAAS Croatia /FAZ/

2005-2006 Presidency of the IAAS Croatia

President: Ivana Gršković

Exchange Week

The activities started in the previous academic year were continued, particularly those regarding the Exchange Week cooperation with the students members of IAAS Spain and IAAS Norway. The Exchange Week (4-10 April 2005) was successful and 20 students, IAAS Spain and IAAS Norway members visited Croatia, while the Croatian students returned the visit to the Spanish (7-14 November 2005) and Norwegian (27 February - 6 March 2005) students. During these two weeks, our students had a chance to learn about these two considerably different countries, their economic and agricultural capacities, cultural heritage and natural beauties, and to realise that the relations with the students from these countries could be even better.

Participation at Annual Meeting of the European IAAS Members - (EDM)

Macedonia, 26 December 2005 to 2 January 2006

We participated in The European Directors Meeting (EDM) which convenes representatives of the European members. The occasion was used for discussions with students from our region about current problems in the European area. The Meeting topic was Implementation of HACCP System in Food Industry, and it attracted about a hundred participants from Europe who presented their plans for the near future and spoke about the implemented projects.

Motivation Weekend

Sljeme, Medvednica, 28-29 January 2006

The motivation weekend was organised on Mt. Medvednica near Zagreb. The motivation weekend is an IAAS activity aimed at bonding of the FAZ students and informing them about the IAAS activities which might motivate them to become members. Previous and future actions and activities were presented to 24 participating students.

Participation in Subregional Meeting (SRM)

Serbia and Montenegro, 19-23 April 2006

This year's Subregional Meeting topic was Implementation of Standards in Agriculture and Food Industry and Sustainable Development. Five IAAS Croatia members, together with other members from the subregion, visited Belgrade and Vršac. They focused on intensification of cooperation, discussed current problems and news, and possibilities for organisation of joint projects and future IAAS activities.

EXPRO – Exchange Program

Within this program three IAAS Croatia members applied for practical work abroad, while we received an application by Delphina Laconte from Spain. We organised her stay on a family farm in Istria in July 2006. This organic family farm is situated in a village near the town of Motovun (Istria).

STUDA Association of Students of Agriculture

President: Sanja Seničić

The STUDA Association was founded in April 2002 to replace the USAF Association of the Students of Agriculture.

In academic year 2005-2006, STUDA has about 300 members in all groups and clubs, which carried out numerous activities, including organisation of the Career Day and 2006 Agronomiade together with the Student Associations of Zagreb and Osijek.

The last year's project Let's Eat Croatian was continued and started to show results. According to the last-year plan, STUDA established the International Relations Group called SMS.

During the reporting period STUDA established close relations with other groups of FAZ students, such as USKA Landscape Architecture Students' Group, and with the International Relations Office.

Investment into the computer education of one member enabled STUDA to set up its web site (www.agr.hr/studa/) which is regularly updated with data on activities undertaken by the Association and its important role in the FAZ students life.

The STUDA would still need a new office and club premises, but our attempts to reach an agreement with the FAZ management failed.

Good news are that the REMI Chess Club became the University of Zagreb Club.

AS Agroecological Group ::

Group Leader: Dora Tomić

AS is following actions of other STUDA groups and arising awareness of their members about the environmental issues.

The activities AS carried during the reporting period included marking of important environmental dates:

- International Waters Day (at the 4th FAZ building)
- Earth Day (together with Green Action).

Other projects are still in the development phase. A traditional eco-project "Together" gathers the students who regularly tidy the FAZ area. We expect all the initiated activities to be finished by the end of the year. The future actions will focus on the environmental awareness raising of students and staff of FAZ and the neighbouring Faculty of Forestry.

Photography Club ::

Club Leader: Marija Tomić

The Club was established to document the events at the Association and the Faculty through photography. The Club was founded in 2003 by a small group of photography enthusiasts, and today it has 20 members. Many members participated in exhibitions at the FAZ and during the Agronomiades (lead by M. Bobanac, PhD), and they regularly recorded work of the Association through photography.

The photographs from the Studa and Faculty life made by the Club members are regularly exhibited in front of the Mandarina Students' Club.

The Club has also initiated its project, the Photography Course, which enabled the Studa members to learn about photography.

Mandarina Students' Club ::

Club Leader: Sanja Seničić

This Club attracts the largest number of the STUDA members, and its premises host the FAZ and Faculty of Forestry students who occupy them during the working days to mingle and to exchange useful information regarding exams and their academic experience.

The Club participated in all projects initiated by STUDA, and took active part in numerous cultural and sports events organised at FAZ. In decades since its founding, Mandarina has become a recognisable landmark in the FAZ students life.

This year, we made the premises more comfortable by installation of a ventilation system, while the office purchased a CD recorder and printer. Mandarina sponsored the FAZ riflery and football team participation in respective championships.

The Club hosted numerous cultural evenings and exhibitions, thus fulfilling its role as a cultural promoter among the students of the Faculty of Agriculture and the Faculty of Forestry.

Sila Hunting Group ::

Group Leader: Luka Kurilić

Sila Hunting Group had a very successful year. Several trips were organised to the Faculty Prolom Hunting Grounds, where the FAZ students participated in erecting the hunting grounds facilities (high stands, feeding places). On several occasions the Group hosted hunters, as well as our teaching and other Faculty staff. The ongoing project is presentation of FAZ and its hunting grounds at the Zagreb Fair in June 2006 through the Croatian Hunting Association. One of the largest projects is shooting of a documentary about the Hunting Group, but the available funds are insufficient so we hope for the project to become feasible next year.

SMS International Relations Group ::

Group Leader: Mario Jukić

The SMS International Relations Group (SMS, Sekcija za Međunarodnu Suradnju) was founded by a group of students who realised how important the relations between the foreign and Croatian students are for exchange of knowledge and experiences, support in finding employment and business collaboration in the sector of agriculture and other sectors.

In 2006, we engaged in exchange of students from several countries in cooperation with the FAZ IRO, USKA Association, Embassy of the Netherlands, and Agro-Network (NGO).

USKA Landscape Architecture Students' Group

Group Leader – Marta Živković

Secretary – Mario Jukić

The USKA Landscape Architecture Students' Group was established on 27 March 2003, based on an idea of a group of Landscape Architecture students. The USKA is a member of ELASA (European Landscape Architecture Student Association). The group is a non-profit, non-governmental and independent organisation, and all its members are volunteers.

The USKA Group purpose is:

- Organisation of different projects, seminars, forums, exhibitions, workshops on landscape architecture, nature conservation and environmental protection
- Promotion of and awareness arising on landscape architecture
- Support to students.

USKA successfully collaborated with STUDA and the FAZ International Relations Office (IRO) on several projects carried out during this year.

The activities pursued during the previous year:

- Organisation of the Student Exchange project EUROPE XL I –the Dutch students visit to Croatia (in cooperation with IRO)
- Organisation of the Student Exchange project EUROPE XL II –the Croatian students visit to The Netherlands (in cooperation with IRO and STUDA)
- Participation in the School of Democracy seminar
- Organisation of EKO-NET Project (in cooperation with IRO, STUDA, Student Association of the Osijek Faculty of Agriculture and NGO Agronet from Belgrade).

Since the Landscape Architecture students are very busy and the USKA group has no premises and necessary facilities, its activities are not of high intensity. We hope to resolve the problem of space and equipment in agreement with FAZ in the near future.

Awards, Commendations, Acknowledgements

2004-2005 Rector's Scientific Paper Award

Boris Lazarević: Faunistic and ecological investigations of ground beetles in corn fields in Croatia, (Plant Science /Plant Protection), Coordinator: Assistant Professor Renata Bažok, PhD

Ivica Lađarević: Investigation of the intensity of attack of olive fruit fly (*Bratrocera oleae* Rossi) on olive trees in Istra, (Plant Science/Plant Protection), Coordinator: Professor Jasminka Igrc Barčić, PhD

Hrvoje Renka: Improvement of trial efficiency using alpha design, (Plant Science/Viticulture and Enology), Coordinator: Assistant Professor Jerko Gunjača, PhD

2004-2005 Dean's Best Student Paper Award

Ante Matijaca, Žarko Uroda, Ante Kasap: The influence of pollution on the composition of ichthyocenoses in the river Sava at Zagreb, (Animal Science/Fisheries), Coordinator: Professor Tomislav Treer, PhD

Amalka Vukelić: Use of molecular markers in genotyping of the Island of Cres sheep, (Animal Science/Animal Husbandry), Coordinator: Professor Boro Mioč, PhD

Andrea Knez: Road planning with protection of landscape qualities, (Landscape Architecture), Coordinator: Vesna Koščak, MSc

Ivana Babić, Maja Perović: Developing scenarios for special zoological reserve Veliki Pazut with its surroundings, (Landscape Architecture), Coordinator: Vesna Koščak MSc

Darko Preiner, Silvio Šimon: Application of microsatellite (SSR) markers for analysis of presumed synonyms of autochthonous cultivars Beretinjok and Topol, (Plant Science/ Viticulture and Enology), Coordinator: Professor Edi Maletić, PhD, Professor Ivan Pejić, PhD

Commendations for Student's Performance

Hana Pernek, Animal Science – Animal Husbandry

Sanja Bibulić, Landscape Architecture

Zdravko Rožmarić, Plant Science – Plant Protection

Ivana Erdec, Animal Science – Animal Husbandry

Klaudija Posavec, Plant Science - Plant Protection

Report on Physical and Health Culture Course

Teaching Staff: Assistant Professor Romana Caput-Jogunica, DSc and Sanja Ćurković, MSc

Outside collaborator: Lajla Pintar, BA

Introduction ::

During the academic year 2005-2006, the Physical and Health Culture Section introduced several new activities in line with the Bologna process:

- the students have two hours of physical culture a week and have an option to chose two kinesiological activities per semester
- the experimental pilot project of individual monitoring and evaluation of students was implemented in the fitness-room,
- the research was conducted into the students attitudes towards the undergraduate and graduate study programs.

At the beginning of the academic year, the students were surveyed about their previous sport results, interest and involvement in sport activities. The analysis of the results showed that 17 students have been pursuing sport activities continually, 55 students occasionally (recreationally), while for 190 students (75%) the classes in Physical Culture are the only sport activity. The survey results reveal and confirm a warring and poor practice of students stopping their sport activities during the secondary school, ultimately resulting in the so called "couch potato" population phenomenon. This phenomenon has been a topic of numerous scientific and professional forums which have been striving to find adequate solutions. Physical and Health Culture program enables each student quality attendance of regular classes and participation in extracurricular sport events. The program is intended to prevent adverse consequences of insufficient physical activity.

The results of the pilot project highlight the importance of the Physical and Health Culture program during the undergraduate study, and point to a need for its introduction into the higher study years as an elective course. During the reporting period, the students were offered: volleyball, handball, futsal (indoor football), basketball, and sports aerobics in the fitness-room, and dancing, folk dancing, table tennis, fitness, chess at the FAZ premises, and swimming, tennis, skating, roller-skating, walking tours, marshalling arts, sand volleyball and handball at the sport facilities outside the FAZ. Sixteen students were released from Physical and Health Culture classes during their primary and secondary education, so they were offered programs specially tailored for them.

Report on the FAZ Students Sport Results ::

At the FAZ

During the academic year 2005-2006, numerous sport events were organised for the FAZ students and staff.

A traditional cross-country race was held at the Maksimir Park, Zagreb, on 25 April 2006. Two hundred students from all study years took part in the event.

The Open Cross-Country race was held in May 2006.

In January and May 2006, the Agronomy 2006 Futsal Cup was organised at the gym of the University of Zagreb Graduate School of Economics and Business. Twelve and ten teams, respectively participated in the cup.

The swimming competition was held at the Utrine Swimming pool, Zagreb on 5 May 2006.

Other competitions included: tournaments in table tennis (Easter Cup), riflery (2nd Christmas and the Easter Cup for the FAZ students and staff), sports aerobics (teams), chess, etc.

At the University

FAZ Sports Society networks all the sports activities: riflery, basketball (male and female), handball (male and female), volleyball (female), futsal (indoor football), table tennis (individual and team), chess (individual and team), sports aerobics, athletics, cross-country, tennis, swimming, sand volleyball, karate and rowing.

Most merit for organisation and promotion of sport activities goes to the leaders of the sport groups within the FAZ sport organisations.

The competitions were organised in: athletics (overall 3rd place for female and 5th place for male students); futsal (indoor football) (eight-finals of the University championship); judo, male students (champions); karate, female students (champions); basketball (male students, quarter finals), cross-country, male students (5th, 25th and 32nd place); volleyball; swimming; handball; sports aerobics team exercises (5th place); table tennis – female students (3rd place) and male students (quarter finals); riflery, male students team (champions), female students team (champions); chess team (6th place); rowing team (11th place) and participation in students' regattas in Dubrovnik, Zadar and Omišalj.

Sport Competitions during the 9th International Meeting of Students of Agriculture Agronomiade 2006, Novi Vinodolski

The meeting of the students of agronomy Agronomiade 2006 held in Novi Vinodolski attracted 31 athletes from the FAZ and other faculties who competed in: futsal, basketball, chess, table tennis and sand volleyball. The FAZ students won championship in table tennis and were runner-ups in futsal.

Student Extracurricular Activities

Harmony Singing ::

Falkuša Mixed Students' Singing Group

The Falkuša Singing Group was founded in 1999, and its founder and promoter was Mate Bobinac, PhD. The group members come mainly from the Faculty of Agriculture, but it has been open for the students from other faculties because of fluctuation of its members who graduate from the faculty or leave it for other reasons.

The Falkuša Singing Group members are: Marina Červar, Mileva Milat, Toni Škarić, Robert Pinčević, Jadran Jelić, Šime Ukić, Frano Spaić, Duje Perić, Davor Pleadin, Vedran Andrijašević, and Nikola Mirošević. Until recently, the artistic leader was Jerica Gracin. The new leader is maestro Dinko Fio who lead numerous choruses and harmony-singing groups in his long career and achieved respectable successes both in Croatia and abroad.

Since June 2005, Falkuša has had a number of performances, mostly in Zagreb.

Falkuša qualified into the Finals of the Omiš 2006 Festival, where it performed two original folk songs composed by Dinko Fio. The group also successfully participated in the Croatian Television program called Good Morning Croatia.

2006 Agronomiade ::

An important event for the students was revival of the gatherings of the agriculture students, popular Agronomiade, which took place in Novi Vinodolski, Croatia, 9-12 May 2006. The gathering was attended by the students of the J.J. Strossmayer University of Osijek Faculty of Agriculture, University of Zagreb Faculty of Agriculture, and University of Mostar Faculty of Agriculture (Bosnia and Herzegovina). The organisation and all activities related to the Agronomiade were carried out by the students and staff of the Osijek Faculty and FAZ. This meeting was an excellent opportunity for FAZ to present itself and its product, the educated students who are good experts and people who appreciate culture and take part in it as

excellent poets, painters, sculptors, dancers, singers ready to take over the role from their predecessors and make a step forward in presentation of their results.

Such a meeting is a good opportunity both for the students to present their knowledge and skills and for the FAZ, University of Zagreb and Republic of Croatia to present themselves good and warm-hearted hosts to the students from other European countries.

Painting ::

The FAZ students and staff have been traditionally pursuing their artistic drive. The exhibition is organised every year. This year, a new artistic form, bonsai, was exhibited for the first time along with the paintings, sculptures and photographs. Thirteen artists showed their works in different techniques.

Blood Donations ::

During the academic year 2005-2006, Mate Bobanac, PhD together with the Croatian Institute for Transfusion Medicine organised two traditional blood donation drives. The FAZ, its students and staff received the expressions of gratitude from the Institute for their participation and support.

Marking Alley at the FAZ Estate ::

Early in the academic year 2005-2006, the FAZ park plants were attached labels with their names in Latin and Croatian. The marking project was created by Mate Bobanac, PhD, with professional support from Assistant Professor Mihaela Britvec, PhD from FAZ and Radovan Despot, PhD from the University of Zagreb Faculty of Forestry. The labels and markings enable the students and visitors to learn about the plants in the park and recognise them.

FAZ PROMOTIONAL ACTIVITIES

Introduction

During the reporting period, FAZ was strongly involved in promotion of agricultural science in educational, scientific and professional sectors. Through collaboration in technical and research fields (e.g. two TEMPUS programs, new MBA study program, two new doctoral studies), and intensive engagement on the study reform which included introduction of new undergraduate and graduate study programs based on the Bologna process, the FAZ management, the FAZ staff members and researchers continued the cooperation and made new contacts with representatives of the international academic community, local and foreign scientific researchers and experts, administrations, businesses, farmers and others in agriculture and related sectors. The FAZ received numerous visits which were used to discuss topical issues in our field of interest, and the FAZ representatives visited institutions in Croatia and abroad with the same purpose.

Considerable efforts were invested into completion and furnishing of the new 6th campus building with necessary scientific research equipment and other facilities.

However, the focus was on the educational reform and introduction of nine new undergraduate study programs which completely change earlier education practices. The new educational system based on the Bologna process was introduced in the academic year 2005-2006 and it certainly means a turning point in education of our students.

Being the leading educational institution in agriculture and related sectors, the FAZ teaching staff got pro-actively involved in creation and introduction of undergraduate, graduate and professional studies in the field of agriculture in Croatian and foreign regional education centres, such as the undergraduate study Mediterranean Agriculture in collaboration with the University of Split, professional study at the Marko Marulić Polytechnics at Knin, and the related study at the University of Mostar Faculty of Agriculture in Bosnia and Herzegovina (More details are given in under the section on Teaching Activities, above.)

The Faculty teaching staff, junior teaching associates in particular, participated in promotional activities aimed at attracting the secondary school students to agriculture during the University Convention, visited secondary schools, appeared in media, etc.

The most important activities aimed at promotion of our institution include productive scientific research and professional involvement, publishing of scientific and technical papers in Croatian and international journals, publishing of books and studies, presence at the Croatian and international congresses and symposia, pro-active involvement in production sector and education of farmers, and promotion of our profession in public media, development of studies used as supporting documentation for drafting the measures of the agricultural and rural policy, etc.

The awards and acknowledgements received by the FAZ and its members are presented below. The Faculty has traditionally presented acknowledgements to the members of its staff for their contribution on the Faculty Day, 26 September. We are particularly proud of the Annual National Science Award received by our researchers for their scientific achievements, and of the fact that this has become a tradition. Numerous recognitions

and acknowledgements presented to our institution speak of the FAZ involvement in activities which are regarded highly, and of good collaboration and relations with the farming community and individual farmers, the business sector and related institutions and professional associations and organisations, representatives of the national, regional and local administration, ministries and different organisations both in Croatia and abroad.

Plaque, Acknowledgements and Awards Received by the FAZ Staff

Plaque

Professor Tito Žimbek, PhD – Dean for Scientific Affairs
for special merits and contribution to promotion of the scientific research, education, professional discipline and reputation of the Faculty and agricultural profession in Croatia and worldwide

Acknowledgement with Medal

Professor Tomislav Treer, PhD
Professor Nikola Mirošević, PhD
for exceptional contribution to the scientific research, education and professional discipline

Acknowledgements

Professor Tajana Krička, PhD
Professor Drago Petošić, PhD
for the first full-professor appointment.

Awards to Teaching Assistants

Neven Voća, MSc
Aleš Vokurka, MSc
for exceptional contribution to the scientific research and educational activities of the Faculty

Awards to Other Staff

Zora Huić
for exceptional dedication, individual and creative approach to his work

Nada Pernar
for exceptional dedication to her work during her long employment

Draženka Piha
for exceptional dedication to her work during her long employment, and for individual and creative approach to the benefit of the Faculty

Marina Leandrini – Poje
for valuable contribution and endeavour to the benefit of the Faculty

Awards, Acknowledgement, Plaques, Certificates of Merit FAZ Received from Other Institutions

2005 Annual National Science Award Scientific field Agriculture, scientific area Biotechnical Sciences

Professor Ivan Kolak, PhD
for application of scientific research results, particularly for use of own cultivars in production and marketing of the local seed

Acknowledgement

From the International Relations Board, University of Zagreb 17 October 2005
for contribution and promotion of international relations and collaboration

From J.J. Strossmayer University of Osijek Faculty of Agriculture, for the 45th anniversary on
21 October 2005
for long and successful collaboration and contribution to advancement and development of
the Faculty of Agriculture

Golden Plaque

From the Croatian Plant Protection Society, Opatija, 7 February 2006
for education of plant protection experts and support rendered to the Croatian Plant
Protection Society

Certificate of Merit

From the Disabled Workers' Organisation of the City of Koprivnica, 3 December 2005
for sponsorship of celebration of the 35th anniversary of the Organisation and the International
Day of Disabled Persons

Tenth Convention of the University of Zagreb

The Students' Center in Zagreb hosted the Tenth Convention of the University of Zagreb from
30 March to 1 April 2006.

The promotional material was prepared with brief but comprehensive information on
undergraduate studies in agriculture and enrolment conditions for the University of Zagreb
Faculty of Agriculture. The exhibition stand and multimedia presentations of the studies were
prepared by Dean for Academic Affairs Professor Vesna Pavić, PhD, Professor Vjekoslav Par, PhD,
and Dragan Tupajić, technical assistant.

University of Zagreb Faculty of Agriculture Alumni Association (AMCA-FAZ Association)

President: Professor Frane Tomić, PhD

Vice-President: Professor Edi Maletić, PhD

Secretary: Professor Milan Pospšil, PhD

Members: Assistant Professor Mihaela Britvec, PhD; Assistant Professor Željko Jukić, PhD; Mato
Bobanac, PhD and Kristina Ferara, BSc.

The Alumni Association of the University of Zagreb Faculty of Agriculture (Almae Matris
Croaticae Alumni-Facultas Agriculturae Zagrabiensis - AMCA-FAZ) was founded at the
assembly held at FAZ in Zagreb on 17 June 2004.

The AMCA-FAZ Association is entered in the Registry of Organisations of the City of Zagreb.

Like many other universities around the world, the University of Zagreb established its Alumni
Association in 1989. The branches have been founded in Croatia, at some faculties of the
University of Zagreb, including FAZ, and abroad (Australia, Canada, USA, some European
countries).

The AMCA-FAZ has 107 members – former FAZ students, highly respected agricultural
scientists and experts. The purpose of the AMCA-FAZ Association is networking of the
former students and graduates and friends of FAZ. Almost ten thousand students graduated
from FAZ. It is an impressive number of graduated experts. The agricultural profession plays
an important role in food production, increase in standard of living in the society, and the
environmental protection. Therefore, networking of the FAZ graduates should create a

favourable environment for launching of different activities and promotion of the image of our Faculty, the University of Zagreb, and national and cultural heritage. The AMCA-FAZ Association supports celebrations of anniversaries marked by generations of former students. It helps young graduate engineers find employment in positions they deserve by their specialisation and knowledge. Lectures and exhibitions are organised to enable the members to meet and exchange their opinions. The AMCA-FAZ members maintain their links with the Faculty, and have the possibility to collaborate with the University of Zagreb and AMCA Associations at other faculties.

The AMCA-FAZ is focusing on recruiting new members, creating the database, creating web pages and finding adequate funding sources.

We hope that the information from this Annual Report shall encourage more colleagues, former FAZ students, to become the AMCA-FAZ members and to take an active part in life of AMCA-FAZ, the organisation of graduate engineers and friends of the University of Zagreb Faculty of Agriculture

We are looking forward to meeting you.

INTERNATIONAL COOPERATION

International Relations Office (IRO) Organisation

The International Relations Office (IRO) staff comprises the IRO Head Professor Ivan Pejić, PhD, the IRO Officer Kristina Ferara, BSc, Ivona Harabajska, BSc, and the International Relations Board (IRB). The IRO Head is also the International Relations Board Chairman.

IRO Scope of Activities

The IRO activities include:

- Regular informing of the FAZ staff members and students on available international cooperation programs.
- Assisting both the FAZ staff members and students in establishing international contacts, locating institutions and projects beneficial to their advancement, acquiring and completing necessary forms, in regulating their status in case of bilateral contracts, in supplying information relevant for trips to individual countries and similar activities.
- Assistance in organising international lectures and visits of foreign scientists at FAZ
- Assisting foreign students, informing them on studying conditions and participation in FAZ educational process and research projects, assisting them on their arrival and during their stay at the FAZ.
- Assistance in preparation of applications and administering of international projects
- International promotion of FAZ.
- Organisation and preparation of IRB meetings, keeping and distribution of minutes
- Assisting the Dean in contracting bilateral and multilateral scientific research and teaching agreements and in running regular international business.
- Administering different European and other programs:
- Preparing annual IRO plan of activities and objectives
- Filing all documentation related to the international cooperation - contracts, agreements, reports, IRB minutes of meetings.
- Cooperation in creation of information package for introduction of the ECTS system.

The following promotional material is available from IRO:

- FAZ brochures;
- brochures on foreign higher education institutions;
- Zagreb Tourist Board; and
- Croatian Tourist Board brochures, etc.

IRO Activities during the Reporting Period 2005-2006

The International Relations Board met regularly to resolve current problems. During the reporting period, IRB held three meetings.

The International Relations Fund was established and the Rules on Allocation of Proceeds from the International Relations Fund are in preparation.

Good collaboration continued with the umbrella International Relations Office of the University of Zagreb, the Ministry, Ministry of Foreign Affairs and European Integration, the Ministry of Agriculture. New contacts were established with different foreign and Croatian institutions.

All information received by IRO are distributed to the FAZ staff in printed form or by e-mail and posted on the notice board and FAZ web site.

The IRO representatives and the IRB members participated in numerous conferences, workshops and discussions related to the international exchange, cooperation and projects.

IRO organised numerous international lectures and a number of workshops.

The International Relations Board of the University of Zagreb presented FAZ with a recognition for contribution to promotion of international relations and cooperation in October 2005..

International Collaboration and Exchange

International Visits to the FAZ ::

Visit of students from the Wageningen Universiteit & Researchcentrum within the EUROPE XL Project – 9-13 November 2005. The visit program included lectures on Croatian agriculture in general, organic agriculture, and landscape planning. The students visited experiment stations, Apple and Strawberry Cooperative and a mushroom farm.

Visit of students and three professors from the University of Hohenheim, 26 November to 1 December 2005. Our guests learned about the problems and successes of the Croatian agriculture. During their four-day visit, they were rendered a lecture and visited the experiment stations, two farms, Petrokemija d.d. Kutina Fertilizers Industry, and Matošević Winery in Istria.

Visit of students and professors from the University AGRO Montpellier Ecole nationale supérieure agronomique de Montpellier, 12-15 December 2005. The students from Montpellier learned about the problems and successes of the Croatian agriculture. During their four-day visit, they were rendered a lecture and visited a number of agricultural and food processing companies.

Visit of the Università di Bologna delegation – On 1 February 2006, FAZ was visited by two guests from the University of Bologna. The purpose of their visit was presentation of UNIADRION (network of the Adriatic-Ionian Basin universities) and of the one-year Master's Program Sustainable Development of Agricultural and Rural Areas of the Adriatic-Ionian Basin.

Visit of the University of Georgia delegation and Mr. Lawrence V. Phillips with family - 14 March 2006. The meeting with our guests was used to discuss the contribution of FAZ to the Žumberak Region revitalisation project. Mr. Phillips is a donor to the fund that will finance the projects to foster development (economy) and quality of life in Žumberak. This is a pilot project, and its results could be used as a blueprint for other rural areas in Croatia.

Klaus Körner, Programme Manager from the European Commission, Deirdre Lennan, Tempus Department, ETF (European Training Foundation) and the TEMPUS office staff visited FAZ on 16 March 2006 for field monitoring of the TEMPUS JEP 17108 project. The meeting was attended by a number of FAZ teaching staff members.

Visit of Mrs Cathy Pisano Weir from the Michigan State University – 30 March 2006, FAZ was visited by the guest from the Michigan State University Institute of International Agriculture and a guest from the USAID Croatia. The meeting was used to discuss possible future collaboration with the Michigan State University.

Visit of the Cochran Fellowship Program delegation - 30 March 2006. The purpose of the visit was to meet with the FAZ staff members who stayed in the USA within the Cochran Fellowship Program.

Visit of delegation for the PR of China, Sichuan Province – 11 May 2006. Within the China delegation visit to the Ministry, the delegation members Mr. Wang Shouyi, Assistant Director General, Science & Technology Department of Sichuan Province and collaborators, and the representative of the Embassy of the PR of China in Zagreb, and the representative of the Ministry, Mr. Aasef El Rushaidat visited FAZ. The FAZ experience with cooperation with the PR of China was presented, and modes of future collaboration discussed.

Workshops and International Lectures

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Round Table: Implementation of BSc and MSc studies - 24 June 2005

Participants were members of the FAZ International Advisory Board: Professor Leopold März, PhD (University of Natural Sciences and Applied Life Sciences), Professor Enrico Peterlunger, PhD (Università di Udine), Professor Zdenko Rengel, PhD (University of Western Australia Faculty of Agriculture) and special guests: Rector of the University of Hohenheim, Professor Hans Peter Liebig, PhD, and coordinator of Tempus JEP_ 17108_2002 Project, Professor Reiner Doluschitz, PhD.

The Round Table enabled the participants to hear from the guests about their experience and discuss the topics related to implementation of the Bologna process: vertical and horizontal mobility of students, previous knowledge and competencies of bachelors, experience with transition to other studies, options for employment of bachelors, etc.

Workshop: ICA Benchmarking Workshop - Developing Degree Programmes by Benchmarking - Learning Outcomes and Assessment Criteria – 10-12 November 2005

Between 10 and 12 November 2005, a workshop was organised at FAZ by the IRO and ICA, the ICA Benchmarking Workshop - Developing Degree Programmes by Benchmarking - Learning Outcomes and Assessment Criteria. Participants were the staff from the Faculty of Food Technology and Biotechnology University of Zagreb and University of Split, University of Zagreb Faculty of Forestry, FAZ staff, and the staff from the International Relations Office of the University of Zagreb. The workshop was coordinated by Professor Robert E. L. Naylor, Chair of the UK Benchmarking Committee for Agriculture and Related Subjects. ICA was represented by Professor Kozak Jozef from the Czech University of Agriculture.

International Scientific Meeting Berry Plant Quality and Sustainable Production – 19-22 April 2006.

Between 19 and 22 April 2006, the International Scientific Meeting Berry Plant Quality and Sustainable Production was held at the FAZ. The meeting organisers were FAZ (Coordinator: Boris Duralija, PhD) and COST (European Cooperation in the Field of Scientific and Technical Research), and co-organisers were the Croatian Society for Berry Fruit and the Ministry (financial aid). The meeting had 86 participants from 27 countries, and 51 paper was presented.

Other International Lectures

::

Jan Robbrecht, Adviesbureau Robbrecht – Agricultural Marketing and Management Consultancy, Gent, Belgium – upon invitation of Professor Miroslav Tratnik, PhD, rendered a lecture on cooperatives – 29 November 2005.

Professor Robert E. L. Naylor, Director of Trelareg Consultants, Great Britain– ‘Research Priorities and Achievements in Breeding Improved Forages (for Forage Plant Breeders); ‘Grain-filling dormancy and quality in wheat (genetic and environmental control of alpha-amylase and premature sprouting, and the impact on breadmaking quality)’ - 10 November 2005.

Professor Peter A. Peterson, Iowa State University, USA - DNA Changes in the Corn Field – 25 May 2006.

Participation in International Congresses and Symposia, Technical Visits

During the reporting period, the IRO Head, IRO Officer and collaborator participated in numerous international congresses and symposia, and went on technical trips in Croatia and abroad.

International Projects

International Projects Approved before the Reporting Period

::

TEMPUS JEP 17108_2002 Reform of Agricultural Studies in Croatia (RASC)

The final conference New Challenges in Agriculture and Impact on Educational Programmes held at FAZ on 25-26 May 2006 wrapped up the three-year Tempus Project Reform of Agricultural Studies in Croatia.

The first conference day (25 May 2006) was used for presentation of results and experience in Project implementation by all the partners and some participants from Zagreb and Osijek. The mobility data for three years of the project implementation should be singled out: 20 FAZ students and 27 professors travelled, and 26 trips made were for the project coordination.

The second conference day (26 May 2006) was open to the agribusiness companies, future employers of our students, media and other interested parties, and the idea was to present the role of education and some of global problems facing agriculture. In addition to the foreign partners on the Project from Austria and Germany and FAZ professors, Petar Čobanković, BSc, Minister of Agriculture, Forestry and Water Management and Zrinka Kovačević, PhD Deputy Minister of Science, Education and Sports were given an opportunity to present their positions.

Other Activities within Tempus RASC Project during the Reporting Period:

Round Table Implementation of BSc and MSc Studies was organised.

A meeting of the Executive Board (5th) was held in Zagreb and Osijek. A visit was organised for the FAZ delegation to the University of Hohenheim, Germany, on 20-22 April 2006 for preparation of the final conference and discussions on future collaboration. Hardware (computers, printers, scanners) was purchased for HRK 239,867.90, and distributed among the FAZ departments. The hardware is adequately tagged as equipment purchased from the Tempus JEP_17108_2002 Project on entrance into premises in which it is placed.

The Project field monitoring was carried out by Klaus Körner, Programme Manager from the European Commission, and Deirdre Lennan, Tempus Department, ETF (16 March 2006).

International Projects Approved during the Reporting Period

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Tempus Projects

Based on the call for proposals of 15 December 2004, the European Commission approved seven JEP Projects in Croatia, with FAZ being a partner on two and coordinator of one project:

- Agribusiness Higher Education Development; Contractor: Centre of Agricultural Sciences, University of Debrecen. FAZ Coordinator: Assistant Professor Josip Juračak, PhD
- Development of a Professional BSc and MSc Course and Short Professional Courses in Farm Production & Management"; Contractor: Larenstein University of Professional Education. FAZ Coordinator: Professor Ivan Pejić, PhD.

TEMPUS JEP 19009_2004 Agribusiness Higher Education Development (AHEAD)

Having in mind that the Agribusiness Higher Education Development Project is extensive, activities related to it started immediately upon notification of the results by the European Commission. The first meeting was held in September 2005 (4-8 September 2005) when the Manager presented the Project to the contractors partners in Croatia and the assignments were distributed.

The AHEAD project is introducing of new BSc and MSc programs of education at the University of Zagreb Faculty of Agriculture and Faculty of Food Technology and Biotechnology. New three-year programs prepared on the basis of the Bologna process covered by this Project include:

BSc study of agribusiness and rural development, FAZ in collaboration with other faculties, starting from 2005; BSc study Food Quality and Safety planned to start from 2006, carried out by same institutions.

To meet the expectations of the Croatian economic sector, a training need analysis (TNA) was conducted of long- and short-term needs for education of experts in the fields under consideration at the onset of the Project, in September 2005, with support from the Ministry of Agriculture and other members of the Consortium from Croatia.

The first meeting of the Consortium and the press conference were held at FAZ on 20 October 2005. From 14 to 16 February 2006, a meeting was convened dedicated to development and supervision of courses at the BSc study programs included in the project.

From 15 to 19 May 2006, the first part of the University of Zagreb teaching staff retraining was organised in:

- Modern Bioanalytical Methods in Food Analysis: Zoltán Gyori, Maria Borbély
- Present and Future of Gmo-S : Zsuzsa Bardócz (Árpád Pusztai)
- Advanced Toxicology: Jozsef Prokisch

The retraining program was attended by the teaching staff from FAZ and Faculty of Food Technology and Biotechnology.

Training for the Agribusiness and Rural Development course is conducted within the MBA program founded on the principles of the International MBA Network. The MBA program started in February 2006. Foreign partners selected 32 students for the program.

Upon the MBA program completion in 2007, the FAZ teaching staff shall be facing two new tasks. Firstly, that the MBA program at the University of Zagreb be accredited by the Supervisory Board of the International MBA Network and to establish its own MBA program for agribusiness in Croatia. The pilot MBA agribusiness program will be started first, and it is planned to later become a regular graduate program in agribusiness and rural development at the University of Zagreb.

Basic Project Data:

Project Contractor: University of Debrecen, Faculty of Agricultural Economics and Rural Development, Hungary, Professor László Kárpáti

Project Coordinator: University of Zagreb Faculty of Agriculture, Assistant Professor Josip Juračak, PhD

Other Project Partners: Wageningen University, University of Hohenheim, Scottish Agricultural College, the Ministry of Agriculture, Institute for Adriatic Crops and Karst Reclamation, Institute of Agriculture and Tourism, Croatian Agricultural Extension Institute, Agrokor d.d., Croatian Chamber of the Economy, Croatian Employers Association, Croatian Society of Agricultural Economists.

Project duration: 3 years

Tempus grant: EUR 499,998.00

Contribution of consortium members: EUR 31,700.00

TEMPUS JEP 19052_2004 Development of a Professional BSc and MSc Course and Short Professional Courses in Farm Production & Management

Within the Tempus Project Development of a Professional BSc and MSc Course and Short Professional Courses in Farm Production & Management, in which FAZ is a partner (Professor Ivan Pejić, PhD), the FAZ teaching staff participated in two workshops organised in Križevci. The first three-day conference and workshop started on 28 November 2005, and FAZ was represented by: Professor Ivan Pejić, PhD; Professor Ante Ivanković, PhD; Assistant Professor Dubravko Mačević, PhD; Assistant Professor Vesna Židovec, PhD and Miljenko Konjačić, MSc. The second five-day workshop also took place in Križevci, starting from 27 February 2006, and FAZ staff included: Assistant Professor Vesna Židovec, PhD and Assistant Professor Zlatko Svečnjak, PhD.

Basic Project Data:

Project Contractor: Larenstein University of Professional Education (The Netherlands) – Mr Dijk Henk

Project Coordinator: Križevci Polytechnics – Mrs Renata Husinec

Other Project partners: University of Veszprem, Keszthely, Harper Adams University College, Newport (UK), FAZ, J.J. Strossmayer University of Osijek Faculty of Agriculture, Croatian Cattle Breeding Center, Croatian Agricultural Extension Institute, Podravka d.d. Food Industry

Project duration: 3 years

Tempus grant: EUR 498,726.00

Contribution of consortium members: EUR 33,600.00

Erasmus Mundus

The Erasmus Mundus Project Promoting Masters Programme in Agricultural and Related Sciences at European Universities shall describe higher agricultural education in Croatia in the English language. The work will be posted on the Project internet pages.

Major International Projects FAZ Applied for during the Reporting Period:

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TEMPUS Project

Management Inertia Generating Opportunity - Training Courses for Institution Building (IB); Contractor: University of Debrecen, Centre of Agricultural Sciences; Coordinator: Marija Radman, PhD

FP6:

- FP6-2005-INCO-WBC-SSA-3 Strengthening the Agribusiness Marketing Research Potential in Croatia - SMART-CRO; Coordinator: FAZ, Marija Radman, PhD
- FP6-2005-INCO-WBC-SSA-3 Improving of Laboratory Capacities at the University of Zagreb Faculty of Agriculture for Determination of Organic Contaminants in Soil, Water and Food – LABCAPHIGH; Coordinator: FAZ, Professor Milan Mesić, PhD
- FP6-2005-SSP-5-A – Highland Value; Coordinator: Environmental Network Ltd, UK; FAZ Coordinator: Marija Radman, PhD

Interreg III

AGRITRAINING; Coordinator: Area Territorio e Sviluppo Rurale-Agricolo; FAZ Coordinator: Marija Radman, PhD

International Exchange

Program CEEPUS (Central European Exchange Program for University Studies) – During the reporting period FAZ was a partner in two CEEPUS Networks: Agriculture and Environment in the 21st Century (CII-HU-0003-01-0506), coordinated by the Szent István University, Hungary and Applied Economics and Management (CII-SK-0044-01-0506), coordinated by the Slovak University of Agriculture, Nitra, Slovakia.

Within both CEEPUS Networks, 11 FAZ students and three staff members visited partner universities and FAZ hosted five foreign students and two professors.

During the academic year 2005-2006, FAZ applied for participation in three CEEPUS Networks for the academic year 2006-2007. All three networks were evaluated as satisfactory, and the exchange started early in September 2006: Agriculture and Environment in the 21st Century, coordinated by Szent István University, Hungary, Applied Economics and Management, coordinated by the Slovak University of Agriculture in Nitra, Slovakia, and For the Safe and Healthy Food and Environment in Middle Europe⁶, coordinated by CORVINUS University of Budapest

Other Student Exchange Programs

Four foreign students from Austria, Bosnia and Herzegovina, Italy, and Slovakia stayed at FAZ within the exchange programs and fellowships for professional training.

⁶ In this CEEPUS Network, FAZ is the partner together with the University of Zagreb Faculty of Food Technology and Biotechnology.

Miscellaneous

Within the EUROPE XL Program, the FAZ students returned the visit to the Wageningen University from 30 October to 12 November 2005. This fortnight trip was used to visit numerous farms, fairs, project areas, student organisations and the Wageningen University, PTC+ training centres and research centres. Within the same Program, the FAZ students participated at the seminar held in Belgrade, SCG.

Publications ::

The International Relations Office prepared a guide for the foreign students (Welcome Guide), which may be obtained from the IRO in printed form or from the IRO internet site. A short ABC Guide was also prepared for the foreign students coming for short visits to FAZ.

The journal Public Service Review: European Union (issue 11) published an article Experts in the Field of Agriculture describing FAZ on two pages.

APPENDIX

FAZ Departments, Department Heads and Deputies

Department of	Head/Deputy	Phone	e-mail
Agricultural Economics and Rural Sociology	Professor Tito Žimbrek, PhD	++ 385 1 239 3856	tzimbrek@agr.hr
	Assist. Prof. Ramona Franić, PhD	++ 385 1 239 3757	ramonaf@agr.hr
Plant Pathology	Professor Bogdan Cvjetković, PhD	++ 385 1 239 3786	bcvjetkovic@agr.hr
	Assist. Prof. Tihomir Miličević, PhD	++ 385 1 239 3732	zjurjevic@agr.hr
Herbology	Professor Zvonko Ostojić, PhD	++ 385 1 239 3766	zostojic@agr.hr
	Professor Bogdan Cvjetković, PhD	++ 385 1 239 3786	bcvjetkovic@agr.hr
Animal Nutrition	Professor Stjepan Mužić, PhD	++ 385 1 239 3912	muzic@agr.hr
	Professor Darko Grbeša, PhD	++ 385 1 239 3800	dgrbesa@agr.hr
Information Science and Mathematics	Professor Vitomir Grbavac, PhD	++ 385 1 239 3723	vgrbavac@yahoo.com
	Darko Biljaković, PhD	++ 385 1 239 3806	biljak@agr.hr
Plant Nutrition	Professor Tomislav Čosić, PhD	++ 385 1 239 3794	tcosic@agr.hr
	Assist. Prof. Lepomir Čoga, PhD	++ 385 1 239 4066	lcoga@agr.hr
Chemistry	Assist. Prof. Ljubica Đumija, PhD	++ 385 1 239 3954	ldumija@agr.hr
	Assist. Prof. Milan Šoškić, PhD	++ 385 1 239 3872	msoskic@agr.hr
Marketing in Agriculture	Professor Damir Kovačić, PhD	++ 385 1 239 3734	dkovacic@agr.hr
	Professor Ante Kolega, PhD	++ 385 1 239 3787	wenzinger@agr.hr
Agricultural Engineering	Professor Silvio Košutić, PhD	++ 385 1 239 3714	skosutic@agr.hr
	Professor Dubravko Filipović, PhD	++ 385 1 239 3719	dfilipovic@agr.hr
Microbiology	Professor Sanja Sikora, PhD	++ 385 1 239 3866	ssikora@agr.hr
	Sandi Orlić, PhD	++ 385 1 239 4034	sorlic@agr.hr
Dairy Science	Profesor Dubravka Samaržija, PhD	++ 385 1 239 3926	samarzija@agr.hr
	Professor Neven Antunac, PhD	++ 385 1 239 3847	antunac@agr.hr
Animal Science I	Professor Ino Čurik, PhD	++ 385 1 239 4010	icurik@agr.hr
	Professor Miroslav Kapš, PhD	++ 385 1 239 3949	mkaps@agr.hr
General Agronomy	Professor Ivica Kisić, PhD	++ 385 1 239 3959	ikisic@agr.hr
	Professor Ferdo Bašić, PhD	++ 385 1 239 3815	fbasic@agr.hr
Plant Breeding, Genetics, Biometrics and Experimentation	Professor Ivan Pejić, PhD	++ 385 1 239 3936	ipejic@agr.hr
	Professor Marija Pecina, PhD	++ 385 1 239 3928	mpecina@agr.hr
Soil Science	Professor Stjepan Husnjak, PhD	++ 385 1 239 3934	shusnjak@agr.hr
	Professor Matko Bogunović, PhD	++ 385 1 239 3802	mbogunovic@agr.hr
Soil Amelioration	Professor Drago Petošić, PhD	++ 385 1 239 3747	dpetosic@agr.hr
	Professor Ivan Šimunić, PhD	++ 385 1 239 3750	isimunic@agr.hr
Agricultural Botany	Assist.Prof. Mihaela Britvec, PhD	++ 385 1 239 3838	mbritvec@agr.hr
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Scientific Research Projects (2002 - 2006) - Ministry of Science, Education and Sports

Investigator	Project	Investigator	Project
Tajana Krička	Ethanol as Biofuel	Josip Borošić	Soiless Culture of Tomato
Milan Poljak	Role of Calcium in Improving the Yield and Quality of Potato Tubers	Željko Vidaček	Soil and Water Protection in Agroecosystems
Vinko Kozumplik	Recurrent Selection and Molecular Markers in Plant Breeding	Marija Uremović	Pig Genotypes for Production of Durable Products
Marija Đikić	Heredity of Tissue Relations and Quality in Pigs	Zvonimir Štafa	Forage Legumes
Mihaela Britvec	Preservation of Plant Diversity on Pastures in the Adriatic Region	Stjepan Sito	Reduced Maintenance of Soil Fertility in Apple and Plum Orchards
Ivan Pejić	Mutant Detection within cv. Plavac mali crni (Vitis vinifera L) by DNA Markers	Davor Romić	Soil and Water Sustainability in the Area of the Future Danube-Sava Canal
Marija Pecina	Application of Biometrics in Agricultural Research	Ivan Kolak	Croatian Bank of Plant Genes (HBBG)
Marijana Barić	Biotechnology and Accumulation of Desired Genes in Wheat T. aest	Đurđica Žutinić	The Rural Youth Interest in Family Farming
Edi Maletić	Ampelographic and Genetic Evaluation of Croatia Native Grape Varieties	Bogdan Cvjetković	Elements for Ecologically Acceptable Plant Protection
Jasminka Igrc Barčić	Biological Control as the Base of Ecological Plant Protection	Zlatko Čmelik	Ecological Evaluation of New Sweet Cherry Cultivars
Ljerka Oštrec	The Investigation of Globodera rostochiensis Woll.in Croatia	Zoran Grgić	Agrieconomic Efficiency of Sustainable Agriculture in a Family Farms
Ivan Jurić	Correlations Between Milk and Growth Traits in Selected Simmental Breed	Sanja Sikora	Biodiversity and Selection of Symbiotic Nitrogen Fixators
Renata Dobrinčić	Fauna and Ecology of Elateridae in Integrated Pest Management	Sulejman Ređepović	Characterization of Indigenous Yeasts Strains
Boris Varga	Sustainable Cropping Systems and Alternative Practices	Zvonimir Ostojić	Possibilities of Applying Reduced Herbicides Rates
Neven Antunac	Physiological Value of Somatic Cell Count in Diagnostic of Mastitis in Sheep	Ivica Kisić	Erosion Risk as Indicator of Sustainable Land Management
Mirjana Čustić	Optimal Fertilisation for Vegetables of High Nutritive Quality	Vjekoslav Par	Risk Analysis and Economic Efficiency on Horticultural Family Farm
Milan Pospišil	Growing Oil Plants in a Sustainable System of Crop Production	Ante Kolega	Export Marketing of Family Farms
Josip Barčić	New, Ecological Methods of Plant Protection in Urban Areas	Đani Benčić	Influence of Agro-ecological Factors on Phenol Contents in Istrian Olive Oils
Tito Žimbek	Croatian Agriculture Adjustment to the EU Association Requirements	Milan Mesić	Influence of Fertilization on Nitrogen Distribution in Ecosystem
Samir Kalit	Influence of Biochemical Processes on Ripening of Autochthonous Cheeses	Ines Vršek	Introduction of Wild Ornamental Species into Horticulture
Dubravka Samaržija	The Flavour and Texture of Traditional Paški Cheese	Silvio Košutić	Ecological and Energetic Aspects of Different Tillage Systems in Arable Farming
Željko Jurjević	Mycotoxins in Food.	Tomislav Teer	Genetics, Nutrition and Ecology in Fresh-water Fisheries
Vesna Pavić	Genetic and Phenotypic Traits of Croatian Native Sheep Breed	Branka Aničić	Evaluation and Preservation of Valuable Landscapes in the Republic of Croatia
Ante Ivanković	Phenotype and Genetic Features of Original Horse Breeds in Croatia	Mladen Knežević	Sustainable Management Systems of Natural Fodder Resources
Nikola Kezić	Biological and Economical Traits of Carniolan Honeybee	Nikola Pavičić	The Effect of Conjugated Trienes and Phenols on CI of Satsuma mandarin
Miroslav Tratnik	Economic Structure Consolidation through Cooperatives	Zlatko Šatović	Genetic Variability of Medicinal and Aromatic Plants
Marija Bujan	Interactions between Surfactants and Biopolymers	Boro Mioč	Genetic Profile and Features of Travnik Pramenka Sheep
Miroslav Kapš	Estimation of Genetic Covariance Structure	Davor Havranek	Investigation of Economic Traits for Introduced Types of Grasses and Clover
Franjo Tomić	Soil and Water Sustainability in the Area of the Future Danube-Sava Canal	Milan Šoškić	Molecular Recognition of Plant Growth Regulators
Zlatko Janječić	Phenotype and genotype characteristics of Croatian autochthonous poultry breeds	Darko Grbeša	Characteristics of Croatia corn genotypes in animal nutrition

ARC–Projects* - Projects of the Ministry of Agriculture, Forestry and Water Management

since 23 September 2003			
Investigator	Project	Investigator	Project
Mario Njavro	Risk management and insurance in agriculture	Jasminka Igrc Barčić	Ecological approach to the tomato pest control
Damir Kovačić	Croatian wine market and wine export from Croatia	Jasminka Karoglan Kontić	Revitalization model of autochthonous grapevine cultivars
Ramona Franić	The efficiency of the agricultural production support model	Boris Duralija	Hydroponics strawberry production
Stjepan Mužić	Duck raising and fattening on family farms	Sulejman Redžepović	Mycorrhizal bio fertilizers in rootstock production
Dubravka Samaržija	The assessment of artisanal sheep cheeses maturity	Marija Romić	Soil quality aspects for organic horticultural farming
Mihaela Britvec	Management of semi-natural pastures in the Adriatic region	Tomislav Ćosić	Effect of fertilizer application upon the yield and quality of apples in Croatia
Milan Mesić	Correction of excessive soil acidity on agricultural farms	Tihomir Miličević	Strawberry integrated pest management in different crop systems
Sanja Sikora	Symbiotic nitrogen fixation and ecological soybean production	Sandi Orlić	Microbiological methods of wine improvement cv.Malvazia on FAF
Marina Pavlak	Forage evaluation development by NIR spectroscopy	Stjepan Sito	Growing tehnology and harvest of berry fruits
Milan Poljak	Sustainable potato management and quality improvement	Đani Benčić	Economic properties of different phenotypes of local olive varieties
Jasna Pintar	Small-scale feed manufactures in pig production improvement	Jasminka Butorac	Renewal of flax production and flax products
Nikola Mirošević	Role of grapevine nursery in island development	Stjepan Husnjak	Sustainable land management on agricultural family farms
Stanka Herjavec	Wine production on the lees in barrique barrels	Dragan Bubalo	Botanical origin and quality of Mediterranean honeys
Josip Borošić	Creating a county vegetable product – sauer kraut	Ante Kolega	Marketing of fish from Croatian Adriatic sea
contracted in 2004			
Romano Božac	Using Pits for Istrian Indigenous Products	Mirjana Herak Ćustić	Grapevine Nutrition - Precondition of Grape and Wine Quality
Bogdan Cvjetković	Pomological Features of Some Apple Cultivars Resistant to Fire Blight	Antun Kostelić	Sheep and Goat Herd Health Protection in Islands
Zlatko Čmelik	Revitalization of Plum Production	Vlatko Rupić	Sanitary Accommodation Conditions in Goat Production
Ivan Turšić	Green Pepper Production in Drip Irrigation System in Podravina	Vjekoslav Par	Olive Grove Irrigation Cost Efficiency
Ivan Kolak	From Seed to GMO-Free Product	Nina Toth	Organic Mulches in Sustainable Production of Lettuce
K. Barić,	Weed Control in Some Vegetable Crops (onion, tomato, spinach) in Direct Seeding in Field		
contracted in 2005			
Zoran Luković, MSc	Alternative Pork Production	Boro Mioč	Istrian Sheep - Lamb Meat and Cheese
Vesna Židovec	Sweet Violet (Viola odorata L.) Production	Dinka Grubišić	Potato Production Despite Quarantine Nematodes

* Agricultural Research Council Projects

Foto album

Undergraduate students of the first generation studying according to the Bologna process

The first lecture in Introduction to Macroeconomics of the Agricultural Economics study program



Interuniversity undergraduate study in Mediterranean Agriculture, Split opening ceremony

Agreement signing ceremony.
Signatories: Professor Jasmina Havranek, PhD, Dean of the University of Zagreb Faculty of Agriculture, Professor Ivan Pavić, PhD, University of Split Rector, and Assistant Professor Dragan Primorac, PhD, Minister of Science, Education and Sports



**Interuniversity undergraduate
study in Mediterranean
Agriculture, Split opening
ceremony**
First generation of students



**Opening ceremony for the 6th
campus building at the University
of Zagreb Faculty of Agriculture**
Welcome speech of Professor
Jasmina Havranek, PhD, the Faculty
Dean



**Opening ceremony for the 6th
campus building at the University
of Zagreb Faculty of Agriculture**
Prime Minister Ivo Sanader, DSc at
the 6th campus building opening
ceremony on 2 December 2005
addressing the Faculty Council
members and guest speaking
on Croatian preparations for EU
Accession



Opening ceremony for the 6th campus building at the University of Zagreb Faculty of Agriculture

Relaxed atmosphere after the opening ceremony: the present and future dean, Professor Jasmina Havranek, PhD and Professor Davor Romić, PhD, respectively, with Petar Čobanković, BSc, Minister of Agriculture, Forestry and Water Management and other esteemed guests



Opening ceremony for the 6th campus building at the University of Zagreb Faculty of Agriculture

Falkuša Mixed Students' Singing Group performing for the Prime Minister, his collaborators and other guests at the opening ceremony



Final conference of the TEMPUS JEP 17108_2002 Project New Challenges in Agriculture and Impact on Educational Programmes at the University of Zagreb Faculty of Agriculture

Members of the Consortium and representatives of the state administration, 26 May 2006: Petar Čobanković, BSc, Minister of Agriculture, Forestry and Water Management, Zrinka Kovačević, PhD, Deputy Minister of Science, Education and Sport, Professor Milan Mesić, PhD, FAZ Project Coordinator



University of Zagreb swimming championship

Female and male team of the University of Zagreb Faculty of Agriculture showing their medals



The first Croatian Wine Queen

Nataša Puhalek, last-year student of the Pomology, Viticulture and Enology study program selected the first Croatian Wine Queen on 24 April 2006

