

## 第7章 大学運営・管理の現況

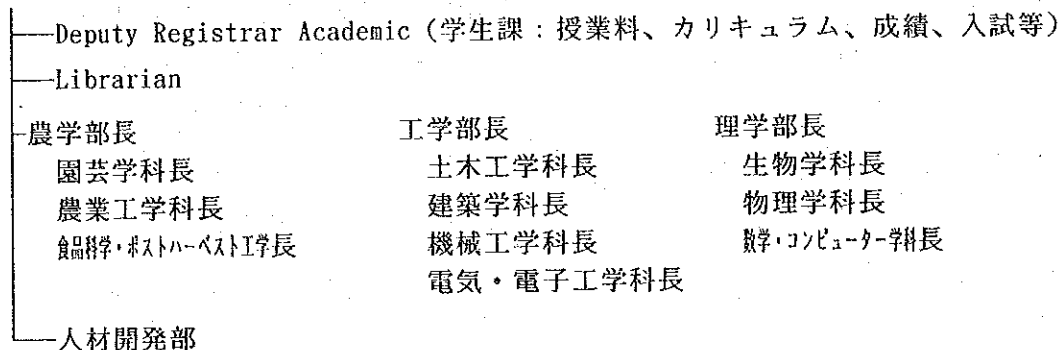
### 7-1 経緯

- 1977年 Jomo Kenyatta College of Agriculture and Technologyの設置  
決定(Diploma Certificate の高等教育機関)
- 1978年 日本の無償資金協力により建設開始
- 1980年4月 日本のプロジェクト方式技術協力「ジョモ・ケニヤッタ農工大学プロジェクト」(第I期)開始(～1985年4月)
- 1981年4月 大学施設のケニア高等教育省への引渡し
- 1981年5月 初めての学生入学
- 1982年3月 公式に開学
- 1984年4月 初卒業式(農学部)
- 1985年4月 第I期プロジェクト方式技術協力延長(～1988年4月)
- 1985年11月 全学科卒業生輩出
- 1988年4月 第I期プロジェクト方式技術協力再延長(～1990年4月)
- 1988年9月 大統領 Constituent College of Kenyatta Universityに格上げを宣言
- 1989年7月 Constituent College of Kenyatta University官報告示  
Jomo Kenyatta University College of Agriculture and Technology  
(JKUCAT)に昇格、名称変更(BachelorとDiploma教育を実施)  
農学部、工学部、理学部の3学部構成
- 1989年 学士課程学生入学
- 1990年 全学部に学士課程学生入学  
Board of Post-Graduate Studies設置  
日本のプロジェクト方式技術協力第I期終了  
日本のプロジェクト方式技術協力「ジョモ・ケニヤッタ農工大学(学士課程)プロジェクト」(第II期)開始(～1995年4月)
- 11月 JKUCAT第1回卒業生輩出
- 1991年7月～1992年3月 大学閉鎖
- 1992年10月 JKUCAT第2回卒業生輩出
- 1993年12月 JKUCAT第3回卒業生輩出  
大統領が独立大学Jomo Kenyatta University of Agriculture and  
Technology(JKUAT)とすることを宣言  
1994年末または1995年初頭に国会を通過する予定

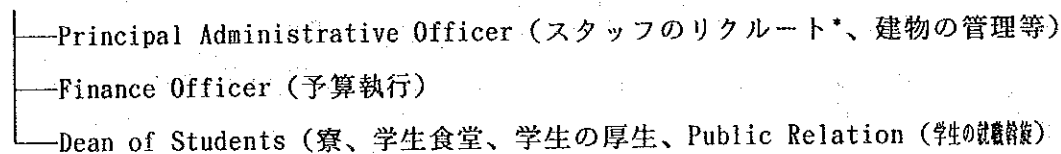
## 7-2 組織

学長 (Principal) のもとに、それぞれ Academic Affairs 担当、Administration 担当、Research, Production and Extension 担当の 3 人の副学長が置かれている。

### Academic Affairs 担当副学長

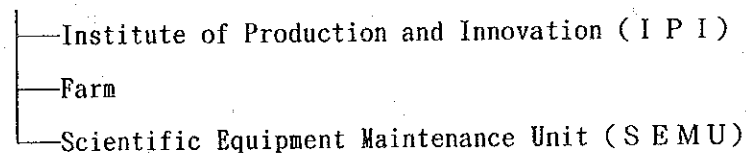


### Administration 担当副学長



(注)\* 教官人事は、各学科に任されている。

### Research, Production and Extension 担当副学長



## 7-3 職員数 (1994年現在)

Academic Staff : 264名

農学部53名、工学部100名、理学部94名、人材開発部17名

Technical Academic : 120名\* (117名)

農学部33名、工学部52名、理学部32名

Senior Administrative Staff : 44名

図書館5名、管理部36名、寮・食堂3名

Technical Staff : 67名

図書館23名、管理部27名、寮・食堂17名

Support Staff : 391名

図書館14名、管理部254名、寮・食堂123名

計886名\* (883名) (注\* J K U C A T の拠出資料の集計ミス)

(農学部86名、工学部152名、理学部126名、人材開発部17名 計381名)

(図書館42名、管理部317名、寮・食堂143名 計502名)

図書館は、各学部にも1名配置しているが、各部局に事務組織は置かれていないようである。この規模の教職員数、学生数であれば、一元化した事務組織のほうが効率的と思われる。

図書館の蔵書は33万冊。毎年6000冊を購入する予定。ジャーナルの購入の予算がないため、JICAに要請中。現職員数42名で、完成目標は57名。学生が書籍を私物化し、蔵書が減ることが問題。

#### 7-4 運営

大学の予算、寄付、職員福利、学生教育等の管理・運営は、政府指名の12名程度の委員で構成されるCouncilで審議される。委員会は各学期に1回開催。

学則、入学者選抜等のacademic活動については、Academic Boardで審議し、ケニヤッタ大学Senateに提案あるいは報告する。

ただし、Councilおよびケニヤッタ大学Senateは、Academic Boardの決定の否認または修正にあたっては、その意見を聞くこととされている。

正式に独立大学になると、PrincipalはPresidentに、Academic BoardはSenateに変更される。

#### 7-5 予算

会計年度は7月から翌年6月までである。

ケニア政府からの予算は、教育省に要求し、学校教育のための高等教育委員会の審議を経て決定される。

予算は、12カ月に分割し大学に配分される。学生経費（学生寮）は、Student Headに支給。

<主な項目別内訳（単位：ケニアシリング）>

	(1993/1994年度)	(1994/1995年度)
人件費	3,471,765	3,800,078
退職員・年金	300,000	380,000
住居手当	888,749	2,370,000
その他の人件費	24,000	39,000

交通手当	132,000	120,000
医療費	80,000	300,000
国内旅費	30,050	53,020
外国旅費	3,500	7,500
通信費	33,000	46,000
交際費	2,000	3,000
会議費	60,500	40,000
祝典費	—	—
光熱料	381,000	425,000
Production経費	131,800	316,900
印刷費	15,000	20,000
図書館経費	70,000	70,000
事務用品費	46,000	48,000
広報費	15,000	25,000
宿舍賃貸費等	16,000	15,100
コンピューター料	19,000	16,500
研修費	61,000	40,000
学生経費	51,000	25,000
大学院プログラム	60,000	25,000
研究プログラム	42,000	50,000
保険料	30,000	54,570
備品費	52,000	50,000
機器保守費	51,000	18,000
宮繕費	17,000	35,000
水源維持費	19,000	27,500
卒業経費	—	15,000
試験経費	—	20,000
返済金	—	375,000
その他	—	—
授業料	△355,800	—
計	6,228,664	9,200,518

- (注) 1. 1993/1994年度は、授業料収入35万5800ケニアシリングを総予算から減額した587万2864ケニアシリングであったが、1994/1995年度は、授業料収入を減額されないとのこと。
2. JKUCAT提供資料によるが、現地専門家によると実際の政府からの配分はこの数字よりも少ないとのこと。

このほかに、施設建設のため、ラボラトリー建設費9万ケニアシリング、学生寮食堂建設費80万ケニアシリング、保険センター建設費30万ケニアシリング、理学部校舎建設費6万ケニアシリング、プロダクション・ユニット・ショップ建設費5万ケニアシリング、スタッフ・ハウス建設費5万ケニアシリング、総計135万ケニアシリングが計上されている。

ケニアの経済情勢に照らし、政府の予算配分増は困難と思われ、独立大学となる本大学の教育・研究のさらなる発展・充実のためには、JICAの援助は不可欠である。

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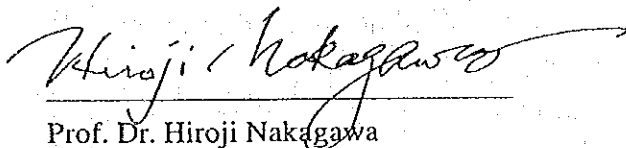


THE MINUTES OF DISCUSSIONS  
BETWEEN  
THE JAPANESE EVALUATION TEAM AND  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE REPUBLIC OF KENYA  
ON  
THE TECHNICAL COOPERATION  
FOR  
JOMO KENYATTA UNIVERSITY COLLEGE OF  
AGRICULTURE AND TECHNOLOGY  
(UNDERGRADUATE PROGRAMME) PROJECT  
IN THE REPUBLIC OF KENYA

The Japanese Evaluation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (JICA) headed by Prof. Dr. Hiroji Nakagawa visited the Republic of Kenya from August 1 to August 11, 1994. During its stay in the Republic of Kenya, the Team had a series of discussions on and jointly evaluated the achievement of the Jomo Kenyatta University College of Agriculture and Technology (Undergraduate Programme) Project (hereinafter referred to as "the Project") and exchanged views on the possible technical cooperation programmes to be further implemented to fulfill the Master Plan of the Record of Discussions signed on April 5, 1990.

As a result of the discussions, the Japanese and Kenyan sides agreed to report to their respective governments of the necessity to extend the period of technical cooperation for another two years as referred to in the documents attached hereto.

Nairobi, August 9, 1994



Prof. Dr. Hiroji Nakagawa  
Leader  
Evaluation Team  
The Japan International  
Cooperation Agency  
Japan



Mr. Simeon S. Lesrima, CBS  
Permanent Secretary  
Ministry of Education  
Republic of Kenya



## THE ATTACHED DOCUMENT

### I. Evaluation of the Project

#### 1. General Observations

- (1) Both the Kenyan side and the Japanese side observed that the Project had made good progress. The Team had studied the progress of the Project through analysis of the project evaluation presented by the Kenyan side and the Team's own investigation, and had a series of meetings with the Kenyan staff and the Japanese experts.
- (2) It was noted that most undergraduate programmes would not have produced graduates by the time the current cooperation period expires on April 18, 1995.

#### 2. Specific Observations

##### (1) Achievements of Output Objectives

- (a) Provision of theoretical and practical higher education to undergraduate students

Undergraduate education is being provided in accordance with the Master Plan of the Record of Discussions.

- (i) Student enrollment had been maintained within the planned capacities.
- (ii) The first group of students would graduate as follows:

Horticulture and Food Science and Postharvest Technology at the end of 1994; all engineering departments at the end of 1995; and Architecture at the end of 1996.

*H.M.*

- (b) Upgrading of academic qualifications, skills and competence of counterparts

Generally, progress had been made. However, variations have been noted between departments.

Through JICA's Counterpart Training Programme and Third Country Individual Training Programme, the skills and competence of Kenyan counterpart personnel had been upgraded. A programme to train staff locally at Ph.D. level had also been implemented.

Apart from JICA's programmes, Monbusho scholarships had greatly contributed to staff development of the University.

- (c) Improvement of facilities and equipment necessary for degree courses and research activities

Facilities and equipment had been provided in accordance with the Record of Discussions.

- (d) Integration of research and development into the University's academic activities


Progress in research activities had been noted, especially in the area of publications, participation in academic seminars and conferences by Kenyan counterparts.

(2) Achievements of Input Objectives by both sides

Contributions to the Project by both sides have been implemented as planned with the following notable exceptions:

- (i) Third Country Individual Training Programme was not implemented for the Fiscal Year 1994 thereby affecting staff training.
- (ii) The Faculty of Science Complex has not been completed thereby adversely affecting the training activities.

*W. N.*



3. Effects of the Project

- (1) Good progress has been made in consolidating the basis for undergraduate education.
- (2) The Kenyan side is taking steps to formally establish the University as a fully fledged university. However, the first students have not graduated from some of the departments. Consequently, it was not possible to evaluate the Project in the light of the original objectives. More time is required before the basis of undergraduate education is fully developed.

4. Future Outlook of the Project

(1) Organizational self-reliance and development

It is necessary to further strengthen the management and administration of the University in order to enhance the improvement of quality of education.

(2) Material and technical self-reliance and development

(a) Technical transfer and appropriateness of technical level

The technology which has been transferred at the University is appropriate.

Reorganization of the University Farm and other production units has been studied. It is advised that priority should be given to education and training in accordance with Kenyan social and technological requirements, and that students should be given exposure to management of production activities.

(b) Counterpart personnel assignment

The necessary number of Kenyan counterparts have been assigned to some departments. In some areas of specialization, further recruitment efforts have to be made. In addition, upgrading of competence of counterparts already assigned has to be stressed.

*26. M.*

(c) Efforts to maintain transferred technology

The Kenyan side is requested to take necessary measures to ensure retention of Kenyan counterparts, especially the academic and technical staff in the University.

(d) Dissemination of transferred technology

Good progress has been made in dissemination activities through the Third Country Training Programmes and seminars conducted at the University. These activities should be expanded and enhanced.

(e) Employment promotion for graduates

In order to maintain the relevant high quality education and training, it is important to:

- (i) Conduct labour market survey
- (ii) Strengthen employment counselling of students
- (iii) Conduct graduate employment surveys

## II. Extension of the Project Period

### 1. Justification

When the current period of cooperation ends, most undergraduate degree programmes at the University will not have reached full cycle. It is not possible to evaluate the Project fully. Both parties came to the understanding that it is necessary to extend the period of technical cooperation.

### 2. Framework of possible Technical Cooperation Programme

- (1) Period of Technical Cooperation to be extended will be two years from April 19, 1995 to April 18, 1997.

*H.M.*

(2) Objectives of transfer of technology

- (a) Provision of theoretical and practical higher education to undergraduate students

To improve the capacity of Kenyan counterpart personnel in the area of curriculum review and in particular, harmonization of common subjects to reduce duplication and encourage sharing of resources.

- (b) Upgrading of academic qualifications, skills and competence of counterparts

To improve the capacity of Kenyan counterpart personnel to give undergraduate education to students based on the curriculum and syllabi through appropriate staff development programmes.

- (c) Improvement of facilities and equipment necessary for degree courses and research activities

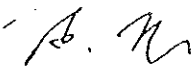
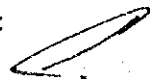
To provide equipment necessary for strengthening undergraduate education and research activities.

- (d) Integration of research and development into the University's academic activities

To improve the capacity of Kenyan counterpart personnel to identify appropriate research subjects and conduct such research.

(3) Other observations and recommendations

The Kenyan side has presented the Master Plan of the University to the Team. The Team studied the long term aspects of the Master Plan and recommended that from the medium term point of view, the following matters should be taken into consideration:



(a) Pursuit of original objectives

Both parties agreed that no new programmes would be initiated or the nature of the existing programmes be altered before the initial objectives of the Project are achieved.

(b) Completion of construction of Faculty of Science Complex

In order to provide the appropriate facilities necessary for the smooth implementation of educational and research activities at the University, the Kenyan side is requested to complete the construction of the Faculty of Science Complex as a matter of urgency.

(c) Re-organization of the Production Units and the University Farm

It is necessary to establish a system whereby:

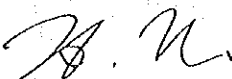
- (i) The policy directions and internal regulations for management are stated.
- (ii) The priority of use of production units and the University Farm should be for education, training and research.
- (iii) The income generated from the units and the Farm should be used to enhance education and research.

(d) Contacts with industry and other relevant institutions

Both parties agreed that contacts with industry and other relevant institutions on a regular basis be further strengthened, in order to improve the quality of undergraduate education and research activities, secure prospective employers, and follow up performance of graduates in these sectors.

(e) Reduction of student intake into the Faculty of Science

The Kenyan side has stated that in view of the present need of Kenyan society for human resource development, it is necessary to admit students into the Faculty of Science. The annual intake into the Faculty would, however, be reduced.

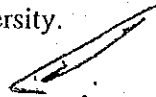


(f) Third Country Individual Training Programme

The Kenyan side requested that the programme be continued in order to enhance staff development.

(g) Scholarships

The Kenyan side requested the Team to convey a request to the Government of Japan to increase the number of Monbusho scholarships available to the University.



A.M.

## ATTENDANCE

### JAPANESE EVALUATION TEAM, JICA

Prof. Hiroji Nakagawa,	Leader (Kyoto University)
Prof. Atsushi Yomota,	Member (Okayama University)
Prof. Masaharu Masuda,	Member (Okayama University)
Prof. Kunio Kato,	Member (Kyoto University)
Prof. Yutaka Fukui,	Member (Tottori University)
Ms. Kazuko Morishige,	Member (Kyoto University)
Mr. Takeshi Takano,	Member (JICA)
Mr. Takao Shibusawa,	Member (JICA)

### EMBASSY OF JAPAN

Mr. Kiyoshi Sakai, First Secretary

### JICA KENYA OFFICE

Mr. Fumiaki Yoshizaki, Deputy Resident Representative  
Mr. Shinji Shibata, Asst. Resident Representative

### JAPANESE EXPERTS, JKUAT

Mr. Sadanori Taguchi,	Team Leader
Prof. Junkichi Iwasa,	Academic Adviser
Mr. Hiroshi Koaze,	Expert
Mr. Yoshio Iwami,	Expert
Mr. Kazunori Oshiyama,	Senior Coordinator
Mr. Ryoichiro Masuda,	Coordinator

### MINISTRY OF EDUCATION

Mr. Simeon S. Lesrima	Permanent Secretary
Mr. Robert M. Mbato,	Deputy Secretary
Mr. Sammy P.M. Kyungu,	Deputy Director (University Education)
Mr. Paul S. Muthui,	Deputy Chief Economist
Mr. Gabriel N. Kirori,	Principal Economist

### MINISTRY OF FINANCE

Miss R. W. Njuguna, Asst. Officer, Japanese Desk

### JKUAT

Prof. R.W. Michieka	Principal
Prof. H. M. Thairu	Deputy Principal (Academic)
Dr. R.W. Mutua	Deputy Principal (R.P.E)
Mr. J. M. Mberia	Registrar
Prof. S. M. Maranga	Dean, Faculty of Engineering
Dr. G. M. Kenji	Dean, Faculty of Agriculture
Prof. F. Kaberia	Dean, Faculty of Science
Prof. R. K. Oniang'o	Director, Postgraduate Studies
Mr. B. C. Cheboi	Senior Asst. Registrar
Mr. A. S. Abdulaziz	Public Relations Officer

*W M.*



2 Evaluation Indicators for JKUAT

EVALUATION INDICATORS FOR JKUAT

Fiscal Year 1993/94		Hort		AgrEng		FSPT		Civil		Arch		Mech		EDE		MathComp	
		12	2	15	4	11	5	24	4	24	2	14	14	18	24	24	
<b>1. Academic staff</b>																	
excl. study leavers	Ph.D holder																
excl. study leavers	Master holder	9	11	4	11	4	4	12	12	16	2	16	7	12	16	2	2
excl. study leavers	BSc holder	1	0	0	0	2	2	6	6	5	5	5	5	4	6	4	16
excl. study leavers	HND holder							2	2	1	1	1	1		6	4	6
excl. study leavers	Professor	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
excl. study leavers	Asso. Prof.	0	0	0	0	1	1	1	1	0	0	0	1	0	1	0	1
excl. study leavers	Sr. lecturer	1	2	2	2	3	3	0	0	2	2	2	0	3	3	3	1
excl. study leavers	Lecturer	8	10	10	10	4	4	11	11	17	17	17	8	10	11	10	11
excl. study leavers	AL	2	3	3	3	1	1	6	6	5	5	5	1	2	6	2	6
excl. study leavers	TA	1	0	0	0	2	2	5	5	0	0	4	4	3	5	3	5
	Study leaver	6		7		3		6		3		6		5			4
	Total Staff	18	22	22	22	14	14	30	30	27	27	20	20	23	28	23	28
	Established / Ideal	26	45	37	39	24	37	35	66	29	46	42	54	34	39	34	43
	Total / Estab(%)	69%		59%		58%		86%		93%		48%		68%	72%		
(italic : on-going)																	
	Ph.D award	0	6	3	7	2	3	0	6	0	1	0	4	0	1	0	0
	Master's award	1	2	4	0	0	0	1	2	2	3	3	2	3	4	1	4
	Staff who left	3	1	1	1	2	2	3	3	2	2	7	7	3	3	3	4
	Teaching load (%)	84%		90%		94%		94%		92%		72%		69%		55%	
	Teaching hours																
lecture : practical	Professor	-	-	-	-	-	-	4	6	-	-	-	-	-	-	-	-
1984 1st Semester	Asso. Prof.	-	-	-	-	3	0	2	3	-	-	5	-	-	-	-	-
Include Diploma	Sr. lecturer	3	3	4	5	4.5	6	0	0	5	10	-	-	4	-	-	-
	Lecturer	3	2.7	3.5	4	4	4	4	4	4.5	9	8.6	4	4	4	4	6
	AL	4	4	4	5	2.5	3	4	6	5.5	9	9	4	4	4	4	6
	TA	4	4	4	4	3	4.5	4	6	4	8	8	4	4	4	4	6
<b>2. Technical staff</b>																	
incl. Lab att.	Established / Ideal	12	33	9	20	26	39	9	14	16	13	14	36	20	28	4	7
	Total / Estab(%)	67%		53%		100%		82%		73%		38%		55%		75%	
<b>3. Administrative staff</b>																	

EVALUATION INDICATORS FOR JKUAT

	Fiscal Year 1993/94		Hort		AgrEng		FSPT		Civill		Arch		Mech		E&E		MathComp	
	(BSc : Diploma)	Pass rate (%)	153	86	107	100	73	61	99	70	83	73	115	86	97	91	71	
4. Student			73		68		100		94		86		71		77		66	
	Employment rate (%)		62															
BSc : Bsc+Dip	Student /Aca staff		8.5	13.3	4.9	9.4	5.2	9.6	3.3	5.6	3.1	5.8	5.8	10.1	4.2	8.2	2.5	2.5
BSc : Bsc+Dip	Student /Tech staff		12.8	19.9	11.9	23.0	2.8	5.2	11.0	18.8	5.2	9.8	8.2	14.4	7.5	14.5	23.7	23.7
5. Research conducted			6		6		6		7		0		0		2		5	
6. Paper published			3		4		2		2		1		0		4		3	
7. Ext. conf/seminar attended			4		7		1		1		1		0		5		2	
8. Int. conf./seminar			0		1		2		3		5		1		4		2	
9. Equipment	Sufficiency (%)		70		70		75		75		80		80		60		60	
10. Library books																		
11. Periodicals subscribed																		
12. Laboratory																		
13. Budget	Operations & Main.		5,706		4,036		4,732		3,981		3,883		4,423		3,051		3,103	
(1,000ksh.)	Personal emolment		8,284		6,337		4,243		7,206		7,439		6,920		6,780		6,281	

INDICATORS FOR OTHER UNIVERSITIES

Fiscal Year 1992/93 Univ. founded in (year) Dep./Fac. founded in (year)	NAIROBI UNIVERSITY										JAPANESE UNIVERSITIES						OTHER UNIVERSITIES					
	CropSci	AgrEng	FoodSci	Civill	Arch	Mech	Elec	F. of Agr	Civill	Arch	Mech	Elec	OSRI(FOE)	UTM(Elec)	KIMTL(FOE)	KIST						
	1956 1970	1956 1974	1970 1973	1956 1956	1956 1956	1970 1970	1952 1952	1949 1949	1897 1897	1956 1956	1956 1956	1970 1970	1949 1965	1970 1973	1970 1972	1970 1972						
1. Academic staff (excl. study leaves)	33	15	16	29	21	26	25	81	60	65	20	18	65	132	163	43						
Ph.D holder	16	4	13	5	1	11	11	70	47	42	17	12	48	28	34							
Master holder	17	11	3	23	18	13	10	9	13	16	1	5	32	68	9							
BSc holder	0	0	0	1	2	2	0	2	0	7	2	1	1	35	0							
Professor	1	0	0	0	0	2	1	39	15	19	9	8	5	2	3	4						
Asso. Prof.	3	1	2	1	0	2	3	27	15	17	8	5	6	26	25	15						
Sr. lecturer	9	3	4	3	3	3	6	0	5	3	0	1	1	26	0	27						
Lecturer	18	11	10	22	16	14	14	15	25	25	3	4	27	68	108	14						
AL	2	0	0	3	2	2	2						15	36	0	0						
Study leave	9	3	3	7	4	5	7															
Total Staff	42	18	19	36	25	31	32	81	60	65	20	18	102	157	180	45						
Establishment	35	16	17	39	24	30	25	81	81	54	24	24		157	171							
Total / Estab(%)	120%	113%	112%	92%	104%	103%	128%	100%	74%	120%	83%	75%		100%	105%							
(FY 1992/93) Ph.D awarded	1	0	0	0	0	0	3						3			34						
(FY 1992/93) Masters awarded	0	0	0	3	0	1	0						2			8						
(FY 1992/93) Staff who left													0			0						
(FY 1992/93) Teaching load(%)	100	80	100	100	82	97	98						100	99		60						
Teaching hour(Lecture)																						
Professor								4	3	2	3	4										
Asso. Prof.								2	2	2	2	4										
Sr. lecturer								0	2	3	0	4										
Lecturer								0	0	0	0	0										
2. Technical staff (incl. lab att)	42	18	15	22	11	31	16	0	6	6	8	4	101	50	29	3						
Established	50	30	17	22	12	33	17	0	6		9	4		50	30							
Total / Estab(%)	84%	60%	88%	100%	92%	94%	94%		100%		89%	100%		100%	97%							
3. Administrative staff	1	1	1	3	2	1	1		13	13		1	207	23	205	7						

INDICATORS FOR OTHER UNIVERSITIES

	NAIROBI UNIVERSITY										JAPANESE UNIVERSITIES					OTHER UNIVERSITIES				
	Fiscal Year: 1992/93	CropSci	AgrEng	FoodSci	Civil	Arch	Mech	Elec	F. of Agr	Ciopl	Arch	Mech	Elec	OSA(FOE)	UTM(Elec)	KIMTL(FOE)	KST			
4. Student (9-4.1 ave.)	411	209	87	312	184	225	297	755	519	428	365	395	722	2008	3081	247				
Pass rate(%)	85	69	98	47	71	52	39	97	100	54	83	92	64	98	91	100				
Employment rate(%)	.	.	100	60	70	.	100	93	100	54	100	100	.	100	93	91				
Student/Aca staff	10	12	5	9	7	7	9	9	9	7	18	22	7	13	17	5				
Student/Tech staff	10	12	6	14	17	7	19	.	87	71	46	99	7	40	106	82				
(FY 1992/93)																				
5. Research conducted	9	6	5	3	6	4	2	.	.	.	.	.	40	27	22	23				
6. Paper published	2	1	5	2	2	6	17	134	88	152	32	79	66	23	3	.				
7. Ext. conf/seminar attended	3	3	4	6	6	2	10	.	.	.	.	.	.	18	12	.				
8. Int. conf/seminar	0	4	0	0	0	0	0	.	.	0	.	4	13	4	4	2				
9. Equipment Quality (scale 1-5)	3	4	5	2	4	3	2	2	2	1	2	3	4	5	4	3				
Quantity (scale 1-5)	2	3	4	3	4	2	1	2	2	1	2	3	4	5	4	3				
10. Library books (unit; 1000 vol.)	352	352	352	352	352	352	352	1,570	5,135	5,135	546	546	.	285	50	200				
11. Periodicals subscribed	1,200	1,200	1,200	1,200	1,200	1,200	1,200	28,067	27,148	27,148	7,200	7,200	.	5,037	300	300				
12. Laboratory	4	10	7	6	4	9	8	.	.	12	.	5	14	30	30	5				
13. Budget (Aca. activity (actual)	212	87	360	140	343	192	323	Y236mil	Y90mil	Y85mil	Y31mil	Y26mil	.	.	.	.				
(1900kshs) P. emolment (actual)	7,519	3,850	3,287	7,000	4,963	7,317	4,439	.	.	.	.	.	.	.	.	.				

NOTES:

Japanese Universities  
 Faculty of Agriculture : Okayama University  
 Civil Engineering and Architecture : Kyoto University  
 Mechanical and Electrical/Electronics Engineering : Tohoku University  
 Other universities  
 OSA(FOE) : University of Dar Es Salaam (Faculty of Engineering), Tanzania  
 UTM(Elec) : Universiti Teknologi Malaysia (Electrical Engineering Department), Malaysia  
 KIMTL(FOE) : King Mongkut's Institute of Technology Ladkrabang (Faculty of Engineering), Thailand  
 KST:Kasetsart University, Thailand  
 Staff Data As of Feb. 1994  
 Research, Publication & Seminar Japanese Universities' data are of fiscal year 1993/94, while the rest of the data are of fiscal year 1992/93.

3 Universities Investment Project  
 — World Bank Fund Allocation —

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

<u>DEPARTMENT/SUB-PROJECT</u>	<u>EQUIPMENT US\$</u>	<u>TRAINING US\$</u>	<u>TOTAL US\$</u>
ADMINISTRATION/INSTITUTIONAL DEVELOPMENT	300,000	45,000	345,000
LIBRARY	280,000(books) 50,000(eqpt)	30,000	360,000
TRAINING WORKSHOPS	260,000	10,000	270,000
PHYSICAL SCIENCES	1,250,000	250,000	1,500,000
BIOLOGICAL SCIENCES	1,086,000	250,000	1,336,000
MATHEMATICS & COMPUTER SCIENCE	820,000	10,000	830,000
=====			
	4,046,000	595,000	4,641,000
=====			
IMPLEMENTATION COSTS & RESERVE			495,000
			=====

*J. Seriat, Aug-1994*

4 Notes for the Steering Project Committee Meeting (Friday 5th August 1994)

(Principal - Jomo Kenyatta University of Agriculture & Technology).

1. ACHIEVEMENT OF THE PROJECT 1990 - 1994.

A report of accomplishment of the project during the period of cooperation under review.

(a) Grant aid:

The University received all the buildings, structures and equipment planned under the grant Aid:

Laboratories and workshops for agriculture and Engineering including service science laboratories.

Lecture room and staff offices

Administration building

Library

Water treatment plant and distribution

Electric power upgrading

Telephone installations

Kitchen extension.

(b) Academic programmes

The degree programmes were established as planned:

Agriculture - BSc. Agricultural Engineering capacity 30  
BSc. Horticulture - capacity 40.  
BSc. Food Science and Postharvest capacity 20

Engineering - BSc. Architecture capacity 20  
BSc. Civil capacity 30  
BSc. Electrical/Electronic capacity 30  
BSc. Mechanical capacity 30.

Student enrollment has been within the planned capacity. Horticulture was the only programme above to have admitted "A" level students. Two cohorts have completed and entered the job market.

The other programmes will produce their first graduates in 1995 - Hort, FSPT; 1996 - All Engineering; Architecture 1997.

(DP - ACADEMIC may add)

(c) Staff recruitment and training.

Recruitment has been difficult due to the specialized programmes. The occupancy rate ranges from 60% to 90%. The difference has been met by Japanese project experts and part time lecturers from other universities and relevant research organization.

Training has progressed at a commendable rate. The project supported 82 members of staff on academic and technical training programmes. Government of Kenya through various arrangements has provided an additional 23 training places for academic technical and support staff.

**(d) Provision of equipment**

Equipment for training and research has been provided in accordance with annual departmental plans. This has greatly strengthened the academic programmes.

**(e) Dispatch of Japanese Experts.**

Experts have been dispatched to departments to short term and long term strengthen areas of need. Interaction between experts and Kenyan Counterparts has ensured appropriate transfer of technology.

**(f) Research.**

Collaboration in research between Kenyan staff and Japanese experts has continued to grow. The project has benefitted tremendously from funds made available for research through the experts and the Japanese administration office at JKUAT.

(DP - RPE may add)

**2. FUTURE OUTLOOK FOR THE PROJECT.**

**(a) Completion of programmes cycle.**

When the current period of cooperation ends in April 1995, most undergraduate degree programmes at JKUAT will not have reached full cycle. We would like to see these programmes continue receiving technical cooperation support to the point where their graduates have entered the job market and their effectiveness evaluated.

Consolidation of these programmes with the necessary primary revisions - is planned to continue to the year 2000 at the earliest.

**(b) Staff Development.**

The JKUAT staff development plan envisages each department training up to 15 additional members to Ph.D level in the next 6 years. This is an inescapable aspect of programme consolidation.

We wish to see further support in the following

- Monbusho awards
- Third country individual training
- Local Ph.D and Msc. awards

**(b) Strengthening of Research.**

Consolidation of academic programmes requires increase in research activity. The same applies for JKUAT based staff training.

**(d) Income generating units**

Current policy encourages universities to develop IGUS to supplement budgetary provisions. JKUAT has identified the Farm, Workshops and a few departmental units for this purpose. The plan is to utilize these facilities for production when not in use for training and research. Funds generated would then supplement provisions for teaching materials, staff training and some aspects of operations and maintenance.



- 5 A Meeting with Japanese Mission Member (Prof. A. Yomota) in the Department of Agricultural Engineering held on Wednesday 3rd, August 1994

## JICA PROJECT EVALUATION MISSION - J.K.U.A.T

### Present:

- |    |                 |                              |
|----|-----------------|------------------------------|
| 1. | Mr. Arika C.N.  | Chairman, Agric. Eng.        |
| 2. | Mr. Yagi K.     |                              |
| 3. | Prof. Hiroma T. |                              |
| 4. | Dr. Lenga F.K.  |                              |
| 5. | Dr. Odhiambo    |                              |
| 6. | Dr. Okwach S.J. |                              |
| 7. | Dr. Kenji       | Dean, Faculty of Agriculture |

### AGENDA

1. Evaluation of the developments in the departments in terms of teaching, staff, curriculum etc.
2. Report on the departmental matters by the Chairman
3. A.O.B.

The meeting started at 2.45p.m. with Mr. Yagi informing the Chairman that Prof. Yomota the evaluation expert had already read through the summary of the developments in the department and would therefore, before further discussion, like to ask some questions related to the document. The questions Prof. Yomota put forward were as follows:

1. He asked the Chairman about the recruitment of the Technicians by observing that the establishment was planned for 17 Technicians but so far only 9 have been employed. The Chairman replied that plans are underway through the college machinery to advertise and employ more Technicians in the near future.
2. He asked why there were mass failures of students in the last academic year according to the departmental evaluation report. In response to this the Chairman said that it was difficult to really pin point the cause, and noted that perhaps the education background of the students in the new 8-4-4 system of education may not have prepared them well enough to handle the syllabus as is.
3. Prof. Yomota also wanted to know the sectors in which the graduates from Agricultural Engineering department in Nairobi University get employed. All the members agreed that at present it is difficult to pinpoint which fields they go to but a survey study is necessary so that accurate information may be found. Prof. Yomota stressed that he would like to get the information as soon as possible. Dr. Kenji proposed a

questionnaire to be carried out by the department to follow up the fresh graduates in the field.

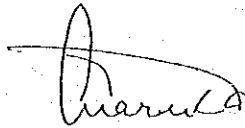
At this point Prof. Yomota gave the Chairman a chance to present his report, comments and views on the department. The Chairman briefly summarized the progress going on the department so far and thanked JICA through the mission for the continued support to the department. He also noted about the anticipated reviews of the curriculum of the BSc programme. During his report, the Chairman noted that although there was a lot of progress achieved so far in the department there are some few problems here and there and requested Prof. Yomota to try and help the department through the Japanese mission to solve some of them. The requests put forward by the Chairman were as follows:

- 1) The department is lacking lecture halls and if we could get more expansion with proper design the problems during lectures will be eliminated. The Chairman thanked JICA through Prof. Yomota for the good job in equipping the laboratories in the department so far. He noted that there is need for more equipments of older ones and replacement.
- 2) There is need for more staff training locally and abroad. The Chairman pointed out that the Technicians in our department are not getting a fair chance when it comes to further training because they have to compete with the lecturers at the same footing with the latter having an upper-hand. If there is a separate training programme for them then it will be fair.
- 3) The Chairman asked the mission through Prof. Yomota to assist in availing the journals in the areas of Agricultural Engineering.
- 4) The Chairman asked Prof. Yomota to see the possibility of sending more long-term and short-term experts to the department. This he feel will help in the development of research through the interaction of these experts with local staffs. He also felt that through these visits, the local staff, especially those enrolled in the PHD- programme will benefit a great deal, and would also facilitate locating Japanese supervisor for the local PHD program.
- 5) The Chairman expressed concern over the suspension of the Third country (PHD Training Programme). He noted that this will likely affect the departmental staff training goal of 26 PHD academic staff by the year 2000, unless other scholarships are available. The Monbusho scholarship is already too competitive and most members are already too old to qualify for it. The Chairman wished JICA would consider the continuation of the Third Country Training Programme. For the local PHD Program, the Chairman requested JICA through the Mission member, to avail more funds for larger numbers of staff to be admitted during each year's intake.

On answering some of the above questions and requests, Prof. Yomota requested Mr. Yagi to make a list of subjects where experts may be needed. He also asked for the list of the area of specialization of technicians and their names, though he noted that the number provided by JICA

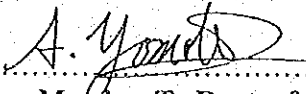
is limited. On the research journals, he suggested that the Chairman try to consult Mr. Ndegwa who is PhD student under him in Okayama to be facilitating making some copies of journals for the department. Dr. Lenga also requested if some funds could be available so that the department could be assisted in the subscription of some of the journals. Prof. Yomota also advised that staff members wishing to pursue their PHD under the local JKUAT program should have research project ongoing before registering or else they may not be able to graduate within the given three years.

The Chairman then gave a vote of thanks to Prof. Yomota, and there being no other business, the meeting was at 4.30 p.m.



Minutes approved for Circulation .....  
Ag. Chairman, dept. of Agricultural Engineering.

Date: ..... August 10, 1994



Minutes approved for Circulation .....  
Mission Member To Dept. of Agric. Engineering.

Date: ..... Aug. 10. 1994

6 Department of Food Science & Postharvest Technology  
Current Status and Future Prospects

1. Staff Development

1-1. Academic Staff

Currently, the department has 13 academic staff members who are supposed to service 24 units for 3 year Diploma course and 46 units for 4 year B.Sc. program with 2 options in Food Technology and Postharvest Technology. The total establishment for academic staff is 24. Despite several interviews conducted to fill up the vacant posts, suitable candidates were not available. Therefore, the department strongly feels that it is necessary to employ and train academic staff from current posted members and graduates of the department.

Due to the limited number of scholarships available and limited duration of Japanese cooperation, the department has identified key areas of specialization required for conducting current teaching programs effectively as indicated in the table below.

Major Specialization	Academic Staff	Qualification	Remarks
Food Chemistry	G.M. Kenji S.M. Njoroge <sup>1</sup>	Ph. D. (Okayama) M. Sc. (Reading)	1. Study leave at Kochi Univ.
Food Microbiology	P.M. Kutima M.C. Kiiyukia* C.A. Omumasaba <sup>2</sup>	Ph. D. (N. Carolina) Ph. D. (Hiroshima) B.Sc. (Nairobi)	2. Applying for Miyazaki Univ.
Food Engineering	W.O. Awino	M.Sc. (Reading)	-Requiring 2 staff members
Food Technology			
Cereal Technology	M.A. Mwasaru <sup>3</sup>	M.Sc. (Canada)	3. Study leave at Malaysia
Fruit & Veg. Technology	None		-Requiring 1 staff member
Meat Technology	C.A. Onyango <sup>4</sup>	M.Sc. (Nairobi)	4. Local Ph. D. candidate
Dairy Technology	C.M. Maina	B.Sc. (Nairobi)	-Requiring further studies.
Postharvest Technology			
Grain Technology	None		-Requiring 1 staff member
Perishable Technology	F.M. Mathooko <sup>5</sup>	M.Sc. (Nairobi)	5. Study leave at Okayama Univ. -Requiring 1 staff member
Postharvest Pathology	M.C. Kiiyukia*	Ph. D. (Hiroshima)	
Postharvest Entomology	L.E. Wongo	Ph. D. (Kansas)	

From the table above, the department urgently needs to recruit and train 6 academic staff members in the areas of Food Engineering, Postharvest Technology and Food Technology.

<sup>1</sup>Prepared for the Japanese Final Evaluation Mission, August 1994.

This will enable the department to conduct teaching effectively at both B.Sc. and Diploma levels. Since this is the minimum requirement for teaching, the department envisages to train more staff members through internal research programs.

#### 1-2. Technical Staff

There are 12 technicians already posted in the department and this includes 7 JKUAT graduates. The department will recruit more technicians as need arises. The technicians in posts support both teaching, research and production programs sufficiently.

### 2. B. Sc. Program

#### Progress

1. First group of B.Sc. students were admitted in 1990/91 academic year and they are expected to complete the 4th year of study at the end of 1994/95 academic year.
2. The department offers two options in Food Technology and Postharvest Technology at B. Sc. level from September 1993.
3. Final year students are currently conducting individual special projects under the supervision of academic staff.

#### Problems

1. Inadequate budget
2. Lack of teaching staff; 2 part time lecturers,  
4 short-term experts,  
3 courses offered by other departments
3. Syllabus needs revision;

The department plans to revise the syllabus after the completion of the first group of B.Sc.

- very high teaching loads
- no coordination of similar subjects

### 3. Production Unit

#### Progress

1. Since the workshops started operating at full scale, the students are benefitted from practical working experience under busy large scale production.
2. Four workshops are fully operational in the areas of baking, fruit & vegetable, meat and dairy processing. Total profit yielded in last 4 years (1990/91 - 1993/94) reached K.Sh. 1,009,241/80.

#### Problems

1. Profit produced has never been ploughed back to the department. This profit is supposed to be used for purchase of raw materials, spare-parts, repair, etc..
2. Management needs to be under the department directly for efficient production and sales.

### 4. Facilities

The new laboratories were provided through Japanese grant aid and these need to be equipped with basic laboratory equipment. The provision of such equipment are currently in progress. However, the syllabus requires more equipment and faster provision of equipment than the current.

The department also requires replacement and repair of out-dated equipment, especially those in the Workshops and old laboratories.

7 Department of Food Science & Postharvest Technology and Japanese Evaluation Mission Meeting held on Wednesday, 3rd August, 1994 in the Faculty Meeting Room at 4.40 p.m.

Present

- Prof. A. Yomota - Japanese Mission Member
- Dr. G.M. Kenji - Dean, Faculty of Agriculture
- Dr. P.M. Kutima - Chairman, FSPT Department
- Mr. H. Koaze - Japanese Expert, JKUAT
- Prof. Kimura - Visiting Professor, Tsukuba University
- Dr. C. Kiiyukia - Lecturer, JKUAT - Taking notes.

Apologies

Prof. Yomota reported that Prof. Suzuki could not come with the mission because he was ill.

MIN 1/94: REPORT OF THE CHAIRMAN

1. STAFF DEVELOPMENT

(a) academic staff

Reported that

- i) the department currently has 13 academic staff members supposed to teach 24 units for 3 year diploma and 46 units for 4 year B.Sc program.
- ii) the B.Sc program has two options in Food Technology and Postharvest Technology
- iii) the total academic staff establishment is 24.
- iv) several interviews had been conducted to fill the posts but suitable conditions were not available.
- v) the department strongly feels that it is necessary to employ and train at least 6 academic staff members.
- vi) due to scarce scholarships available and the limited duration of Japanese Cooperation, the department has identified key areas of specialization required to conduct teaching programs effectively. These areas are:
  - Food Engineering - 2 staff members
  - Food Technology
    - Dairy Technology - 1 inpost requires training
    - Fruit & Vegetable Technology - 1 staff member (none available)
  - Postharvest Technology
    - Grain Technology - 1 staff member (none available)
    - Perishable Technology 1 - 1 staff member

- vii) the department urgently needs to recruit and train 6 academic staff members to fill up the areas indicated above. This is the minimum requirement for teaching.

Requested:

that the department urgently needs more scholarships to train 6 academic staff members in the areas of:

- food engineering
- food technology
- postharvest technology

(b) Technical Staff

- i) There are 12 technicians in the department. These include 7 JKUAT diploma graduates. Other technicians will be recruited as need arises to support teaching, research and production. The present staff is serving the department efficiently.

2. B.SC PROGRAM

Reported that

- i) The first group of B.Sc students admitted in 1990/91 academic year will complete their 4th Year at the end of 1994/95 academic year.
- ii) Final year students are currently conducting individual special projects under the supervision of academic staff.
- iii) The department has had problems in teaching programmes due to:
- inadequate budget
  - lack of teaching staff whereby it has requested the services of 2 part-time lecturers, 4 short-term experts and 3 courses taught by other departments.
  - syllabus needs revision so that common courses can be harmonized with other departments to reduce high teaching loads.

3. PRODUCTION UNIT

Reported that

- i) students have benefited tremendously by working in the workshop since they started operating at full scale.
- ii) four workshops are operational in Baking, Fruits & Vegetables, Meat and Dairy Processing Technologies. The total profit for the last four years (1990/91 - 1993/94) amounted to Kshs. 1,009,241.80.



- iv) profit yielded has never been ploughed back to the department. The profit is supposed to be used in purchasing of raw materials, spare parts and pay for repairs.
- v) the management of the production unit needs to be directly under the department for efficient running and sales.

#### 4. FACILITIES

Reported that

- i) new laboratories provided under grant aid need to be equipped with basic laboratory equipment. Although provision of such equipment is under progress department requests that more equipment be provided and the provision be faster than at the current rate.
- ii) the department requires replacement and repair of outdated equipment especially those in the workshops and old laboratories.

Requested

- i) faster provision of equipment to the new laboratories than it is at present.
- ii) replace and repair outdated equipment in the workshops and the old laboratories.

#### 5. RESEARCH

Reported that

- i) due to high teaching load, the number of research projects in the department by academic staff has reduced.
- ii) the department is using 4th year students during their special projects to carry out the academic staff members research work.

MINUTE 2/94: AOB

#### Question 1

How will the department reduce the high teaching load while the number of units per student per academic year has already be agreed upon?

#### Answer

Harmonization of course syllabus that are similar to those in other departments the teaching load would be reduced. One lecturer would be able to teach students in more than one department and therefore reducing the load for others.

Question 2

Why are research activities and publications are getting less than expected?

Answer

The research activities and publication have reduced because of increasing teaching load. The problem is being overcome by using 4th year students projects to aid academic members carry out their research. However the academic staff will endeavor to carry out individual research despite the heavy teaching load.

Question3

Does the department intend to employ the graduates after completion of their studies?

Answer

The department intends to employ best students as Teaching Assistants in both Food Technology and Postharvest Technology as part of staff development.

There being no other business the meeting ended at 5.30 p.m.

MINUTES CONFIRMED *D. Lusoma* DATE: 8/8/94  
CHAIRMAN, FSPT .....

*A. Yomota* DATE: 8 Aug '94  
PROF. YOMOTA .....

EVALUATION MISSION MEMBER









JICA