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IAAS-II CONTRACT FINAL REPORT

Title: INSTITUTE OF AGRICULTURE AND ANIMAL SCIENCE PROJECT-II

Project No. 367-0148

Contract No. ASB-0148-C-00-5156-00

Between

UTAH STATE UNIVERSITY

and

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Assistance to

THE INSTITUTE OF AGRICULTURE AND ANIMAL SCIENCE

TRIBHUVAN UNIVERSITY

RAMPUR, CHIWAN, NEPAL

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TABLE OF CONTENTS

Acknowledgement..... i
Executive Summary..... 1
I. Introduction
A. Antecedents..... 4
B. Original Rationale..... 5
II. Contract Features
A. Summary..... 7
B. Scope of Work
1. Technical Assistance
i,ii,iii, Long Term Advisors..... 8
iv,v,vi, Short Term Consultants..... 9
2. Training
i. Academic..... 10
ii. Exchange of Scholars..... 11
iii. Technical..... 12
iv. Skills..... 12
v. Seminars, Workshops, Conferences. 12
III. Evaluations..... 13
IV. Report of Contract Activities
A. Administration..... 14
B. Technical Assistance
1. Agriculture Education..... 15
2. Animal Science..... 16
3. Veterinary Science..... 17
4. Academic Administration..... 19
5. Consultants..... 21
6. Visiting Scholars..... 22
7. Women in Development..... 22
C. Training
1. Academic..... 23
2. Exchange Scholars..... 25
3. Short Term Technical..... 25
4. In-Country (Skills)..... 27
5. Workshops and Seminars..... 28
6. Short Courses..... 28
7. Training Travel Grants..... 29
V. Financial Report
A. Management..... 30
B. Expenditures..... 31
VI. Observations..... 32
VII. Appendices..... 34

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Dr. James H. Thomas, Project Director, Utah State University

FINAL REPORT OF CONTRACT

INSTITUTE OF AGRICULTURE AND ANIMAL SCIENCE II CONTRACT

Project No. 367-0148

Contract No. ASB-0148-C-00-5156-00

Executive Summary

The contract for technical assistance (TA) and training was part of the Institute of Agriculture and Animal Science (IAAS) project agreement between the Government of Nepal (GON) and the United States Agency for International Development (USAID). The contract for TA and training was signed September 16, 1985, by Utah State University (USU) and USAID but was made retroactive so the contractual time period was for five years beginning on September 3, 1985, and ending September 2, 1990.

The TA portion of the contract included: 1) three long-term advisors in selected scientific disciplines, 2) a periodic continuing consultant in academic administration, 3) fifteen person months of short-term consultants, 4) an incountry administrative and logistics office under the direction of a Chief of Party (COP), and 5) an on-campus coordination unit.

All the TA and training activities were designed to assist the IAAS in developing increased capability to provide trained agricultural workers, teachers, and scientists to fill the manpower needs of the agricultural sector of Nepal.

The training component of the contract was designed to provide academic and technical training at different levels to meet the needs of the IAAS. The contract was to include: 1) graduate training for four Ph.D and six M.S. candidates (amended to six Ph.D and nine M.S.) outside Nepal, 2) technical training for twelve IAAS employees (amended to eighteen) at overseas sites, 3) opportunities for three IAAS faculty to participate as exchange scholars at selected U.S. universities and research institutes, 4) opportunities for three international visiting scientists to teach and do research at IAAS, 5) opportunities for three IAAS faculty and three Ministry of Agriculture (MOA) employees to exchange places and work for six months each, 6) annual workshops on selected topics of interest to IAAS faculty and students, 7) incountry training courses for 110 IAAS employees in skills related to IAAS support services, and 8) travel grants to IAAS faculty who obtained grants for academic studies from other sources.

The contract was also to provide technical and academic support for several activities of the overall project which were outside the terms of the contract itself. These included: 1) review and editing of appropriate subject matter text books by USU professors which were to be written by IAAS faculty for use at IAAS. These books were to be published in Nepal using project funds after being accepted by IAAS, and reviewed and edited by USU, 2) a list of equipment, requested by IAAS for upgrading and supplying the various scientific laboratories on campus, was to be reviewed by USU and, in addition USU was to provide expert

services in establishing the specifications of the equipment. The equipment was to be purchased using World Bank funds and delivered to the institute in time for USU contract advisors and consultants to set up, test, and calibrate the instruments, and teach laboratory technicians and IAAS faculty in the use, care, and maintenance of the equipment, 3) USU consultants were also to provide expert services in planning several features of IAAS farm and campus layout, water wells, and farm management.

Section IV, Report of Activities, details the performance under the contract. All but two of the activities outlined in this executive summary were addressed and completed with varying degrees of success. The two contractually required activities not performed were the textbook review and the exchange between MOA employees and IAAS faculty. The textbook program was delayed beyond retrieval by changes in IAAS administration and lethargy of the textbook committee. No drafts of textbooks were submitted to USU for review during the life of the contract. The MOA/IAAS exchange was finally deemed of little value, and the corresponding funds were diverted by amendment to the academic training budget.

The project and contract were reviewed after eighteen months by a USAID review team and significant changes were recommended for the TA and training activities. These are described in Section II.

Near the end of the contract USAID/N requested that some contract funds be used to provide incountry costs for some Women in Development and Women in Farming activities. Two consultants during 3 TDYs spent a total of 8 months in Rampur.

I. INTRODUCTION

A. Antecedents

The IAAS II project was a follow-on project designed to continue the establishment of a viable agricultural institute of higher education to provide trained manpower for the agricultural sector of Nepal. The establishment of the institute was started when the GON through the Tribhuvan University (TU) decided to move the agricultural campus of TU from the Kathmandu valley to a location in the Terai near the village of Rampur in Chitwan province. Land was made available from property owned by the royal family. There was no infrastructure or suitable buildings. USAID agreed to provide funds and expertise for some basic activities.

Trained manpower, i.e., institute instructors and professors, was in critical short supply at this location due in part to the actual lack of trained agricultural scientists and also to the reluctance of former professors to move to the isolated location and live with their families under rather spartan conditions. Young capable faculty and other selected individuals were therefore identified and immediately sent for undergraduate or graduate training under the IAAS-I contract which USAID had with the Midwestern Universities Consortium for International Agriculture (MUCIA). At the same time MUCIA university faculty were assigned to the Rampur campus as advisors, teachers, and technicians to assist with planning, administration, campus development, training and teaching, and overall coordination of the IAAS-I contract. The

IAAS-I contract terminated in 1984. In anticipation of a follow-on activity USAID/N funded an interim advisor/consultant who provided logistic and expert services until the IAAS-II contract was initiated in September of 1985.

B. Original Rationale

The establishment of the IAAS was a response to a recognized need for a scientific educational institution to provide appropriately qualified manpower for the agriculture sector of Nepal. Agriculture employs more than two-thirds of the population and accounts for more than half of the gross domestic product. Farm workers/owners are largely illiterate, lacking in technology, unable or unwilling to obtain credit, and produce their crops and livestock with traditional subsistence family-oriented methods. There was a significant lack of extension workers and extension activities. Agents who were poorly trained were ineffective, and those who were better trained were not content to live and work in isolated areas. There was no significant effort to impact the lives of women and children in rural areas.

Prior to the establishment of IAAS in Rampur, the Tribhuvan University in Kathmandu trained agricultural professionals in the School (College) of Agriculture. Many of these individuals initially entered the agriculture workforce in rural areas but later chose to continue their studies for advanced degrees outside of Nepal or secured employment in the cities- in agribusiness and sometimes in non-agricultural activities.

Agricultural research was being performed by both the Tribhuvan University and the Agricultural Research Division of the Ministry of Agriculture. The quality of research was good but was not oriented to solve national problems and frequently represented only the interests of individual scientists. Research budgets did not allow for post graduate training or post doctoral upgrading, and research equipment and supplies were in short supply. Researchers were thus continuing to work at the levels and on problems extant when they finished their last degree. Furthermore, there was no national coordination of agricultural research, and the main research agencies competed for budget which resulted in an adversarial relationship instead of a cooperative effort.

The establishment of IAAS at Rampur was intended to start a national agricultural educational institution which would provide appropriately trained manpower for Nepal in research, extension, and education. The curriculum was designed to offer the following types of training to male and female students as follows:

a - Bachelors Degree in agriculture which would qualify graduates for further study in Nepal or abroad, or train professionals for more technical and academic work.

b - 2-year certificate in technical/vocation agriculture for extension specialists and agribusiness workers.

c - One-year certificate in technical and practical agriculture which qualified graduates to work with traditional and subsistence farms as well as farms using more technology.

II. CONTRACT FEATURES

A. SUMMARY

The IAAS-II contract was part of the IAAS project sponsored by GON, with loan funds from the World bank and with grant funds from USAID/N. The contract provided for the technical assistance and training portions of the project and was supported wholly by USAID/N. Technical assistance included long-term technical and academic advisors and short-term (TDY) consultants. Training included academic, non-academic, professional, technical, administrative, and skills training.

The long-term advisors were to assist the IAAS in specific disciplines as well as provide some teaching/advising while IAAS faculty were away for academic training. The Project Paper(PP) chronogram showed long-term advisors for the first three years with continuing short term administrative assistance for all five years. TDY consultants were programmed throughout the life of the contract.

Academic training was to be completed during the first three years with all other types scattered throughout the contract time as appropriate.

B. Scope of Work

1. **Technical Assistance**

i. Agricultural Education Advisor (36 months)The Ag. Education Advisor [who was also designated as Chief of Party (COP)] was to: 1) provide professional and expert advice to the IAAS faculty in curriculum development for the three programs by working with the dean, department heads, and professors to establish suitable dynamic curriculum, 2) assist faculty to improve teaching methods and techniques including increased use of audiovisual equipment and laboratory experience and, 3) give seminars on appropriate topics and organize and conduct pedagogy workshops.

ii. Animal Science Advisor (24 months)The animal science advisor was to: 1) assist the animal science departments and other basic science departments in developing "hands on" laboratory practicals for the undergraduate and certificate programs, 2) advise on research being conducted within the departments, and 3)provide resource information.

iii. Veterinary Science Advisor (24 months)

The veterinary science advisor was to: 1) provide advice and expert assistance to the IAAS farm livestock manager, 2) develop herd/flock health maintenance programs, 3)train IAAS veterinarians in diagnostics and treatment, 4) advise on the development and equipping of a veterinary parasitology laboratory, and 5) teach

seminars on various veterinary topics of interest to faculty.

iv. Academic Administration Advisor (20 TDY Months)

The academic administration advisor was to provide continuing expert and professional advice to the dean and other administrators of IAAS in planning, organization, finances, budgeting, administration, admissions, and evaluations. He was also to identify ways to increase the recruitment and involvement of female students.

v. TDY Consultants (15 person months)

TDY consultants services were to be secured in some specific disciplines with others to be identified during the contract according to need.

vi. Visiting Scientists

The contract provided for up to three visiting scientists to come to IAAS on post doctoral or sabbatical arrangements. The contract was to provide all costs of the visiting scientist except salary and benefits for six to twelve months in disciplines of interest to IAAS. The visiting scholars would pursue research and teaching in their own discipline and give seminars as appropriate to faculty and students of IAAS.

vii. Technical Assistance Under the TA portion of the contract USU was to provide a project coordinator and suitable staff on campus to expedite and monitor all activities of the

contract. In addition, an incountry office under the direction of the COP was to assist the campus office with incountry and regional training and provide logistics to advisors, consultants, scholars and the workshops.

2. **Training**

i. Academic

The contract was to provide academic training for ten IAAS faculty in a continuing effort to upgrade the departments and establish a core of improved teachers and research scientists. Prior training efforts under MUCIA and USAID/N provided scholarships for forty faculty. The IAAS-I final report and the project paper (PP) for IAAS-II identified further training as being essential. However, because training in the United States had proven lengthy and expensive, the PP and contract called for six of the ten participants to attend South Asia universities. The number of training positions and proposed locations was amended, after the evaluation.

The disciplines and areas of need were specified as follows:

FIELD	DEGREE
Extension Education	PHD
Horticulture	PHD
Entomology	PHD
Horticulture	PHD
Animal Breeding	PHD

Soil Science	PHD
Extension Education	MS
Plant Pathology	MS
Rural Sociology	MS
Agriculture Engineering	ME
Soil Science	MS
Animal Science	MS
Entomology	MS
Animal Breeding	MS
Aquaculture	MS

ii. Exchange Scholars

Academic and scientific stagnation has been a serious problem in Nepal where limited resources and physical isolation has made it difficult, if not impossible, for scientists and educators to keep abreast of the latest developments. The contract training activity provided opportunities for six scientific or educational exchanges. Three grants to deserving senior faculty for study and/or research in the United States were to be provided In addition, three exchanges of GON Ministry of Agriculture and IAAS faculty were to be provided. The exchanges would allow IAAS faculty to interact with scientific colleagues and promote informal cooperation or research of mutual interest. These GON/IAAS exchanges would give officials from GON and faculty from IAAS an opportunity to understand the needs of their respective units in terms of the manpower and educational requirements.

iii. Technical Training

Eighteen short-term technical training opportunities were to be provided for IAAS staff in areas identified as critical to the continued development of the institute. This training was to be outside Nepal but within the South Asia Region unless a competent source of training was available in Nepal.

iv. Incountry Skills Training

The contract required training of support personnel for IAAS. The needs assessment identified 110 positions or potential positions that would require an individual with additional skills training. This training was to be done in Nepal at qualified skills instruction centers in the private or public sector.

v. Seminars, Workshops, Conferences

Visiting scientists, scholars, and consultants who participated in contract activities in Rampur were to be encouraged to present seminars at IAAS on topics of mutual interest. The contract also called for five workshops on selected topics. Expatriate and national experts were to be invited to facilitate the workshops and conference proceedings were to be published.

C. Assistance with Publications

The academic community in Nepal has relied almost exclusively on agriculture publications and text books printed in other

countries. Many of these materials are not suitable or appropriate for use in Nepal. The project designers recognized the need for nationally written and published texts in both English and Nepali as well as laboratory manuals and classroom materials.

While the contract did not provide support for writing of these books and materials, it was to provide review and selection of authors and review and editing of written manuscripts prior to publication in Nepal. Project funds were provided for payments to authors and publishers and contract funds were identified to pay for review and editing.

III. EVALUATIONS

The project provided for periodic evaluations of the project and contract. After eighteen months of contract activity, and in anticipation of a proposed change in the COP, the USAID/N had the project and contract evaluated. The recommendations of the evaluators, which were implemented, changed some of the contract features and emphasis. The principal changes were as follows:

1. The agriculture extension advisor (COP) was not to be replaced. Incountry administration was to be assumed by one of the other advisors, and the required contract activities in curriculum development and classroom training were to be handled by the academic administration advisor and/or TDY consultants.

2. The number of academic training opportunities was increased from ten to fifteen to include six Ph.D. and nine M.S.

degrees at regional universities, and one in the U.S.

3. Travel for non-academic training was increased to provide opportunities for IAAS faculty to attend scientific meetings.

4. Funds were to be provided for IAAS faculty to travel to and from study abroad if non-contract funding was obtained.

5. Women in development activities were to be include.

6. The budget was amended (twice) to provide funds for increased activities in several categories and reductions in others.

These recommendations, which were accepted and authorized by contract amendment, significantly changed the nature of the contract. Priorities changed and resources were re-allocated. Changed priorities caused long delays in implementing portions of the contact that had specific timetables, i.e., assistance to laboratories and selection of participants for academic training.

IV. REPORT OF CONTRACT ACTIVITIES

A. Contract Administration

Two administrative offices were established. At USU the College of Agriculture provided office space, a half-time project coordinator/director, and a full-time secretary. Financial and other audits were provided by the appropriate central USU offices as part of the indirect cost. At Rampur the COP established an incountry administrative unit which included a training specialist, an accountant, two drivers a messenger, guards for the advisors'

homes, and a physical facilities maintenance technician. Both offices were under the direction of the Project Director, and all financial reconciliation and billings were done in Logan.Both offices provided assistance to advisors, equipment and supplies acquisition, inventory control, and general logistics. Technical and training reports were prepared in Rampur, and financial reports were prepared in Logan. The project coordinator made periodic trips to Nepal to provide administrative guidance and oversight and facilitate contract activities.

In addition to the project director's visits, USU, as a matter of university policy, sent two senior administrators to review the project at no cost to the contract. This allowed the university administrators to become better acquainted with the project and made personnel and policy decisions by university officials more appropriate and meaningful. The USU faculty member assigned to the project was Dr. James H. Thomas who had worked overseas for ten years prior to the Nepal contract assignment.

B.Technical assistance

1. Agricultural Education Advisor/COP

Dr. Wesley Maughan was assigned as agriculture education advisor and COP. The original term of the position was 36 months. He established the Rampur office, arranged for refurbishing the "MUCIA" homes for use by the advisors and took the lead in writing the Plan of Work (POW) which is contained in Report No. 2.

Dr. Maughan acted as advisor to the Dean of IAAS in

administrative matters when the academic administration advisor was not in Rampur. He also advised the individual departments on curriculum, admission, and graduation requirements, and in the area of extension and agriculture education he helped develop the curriculum and coordinated acquisition of library materials. Dr. Maughan served as an advisor in social research and extension and organized the 1st annual Farmers day at IAAS which hosted 450 local farmers on the campus.

During Dr. Maughan's first year in Rampur, he helped the IAAS plan a pedagogy workshop which was successfully held and attended by faculty from all three IAAS campuses.

COP duties took an inordinate amount of time and energy, and communication due to the isolation was slow and frustrating. Proposed programs were delayed, and as a result Dr. Maughan decided to resign his position at the mid point of his planned assignment. The evaluation referred to in Section III recommended he not be replaced, and this part of the overall academic activity was discontinued. Dr. Maughan's ETA report is NO. 13.

2. <u>Animal Science Advisor</u>

Dr. Robert Thompson was selected as the animal science advisor. This was a 24-month assignment and his report is No. 16.

Dr. Thompson worked as an advisor to the departments of animal science, dairy science, agronomy, and statistics. He helped review the departments curriculum and helped the individual instructors

develop classroom materials and laboratory practicals, and assisted with preparation of audiovisuals materials.

Additionally, he helped the institute farm and livestock managers with production plans, farm and animal (including dairy) management, and repair and maintenance of equipment and facilities. Dr. Thompson collected, selected, and multiplied several species of semi-tropical pasture species and introduced them for farm production. He also developed a program for making silage utilizing an abandoned silage chopper and an old concrete lined pit.

The IAAS had several plantings of fodder trees including Leucena spp. Dr. Thompson worked with the animal science department and farm manager in fodder tree forage feeding of the buffalo and dairy animal herds.

3. Veterinary Science Advisor

The veterinary science advisor's position was filled by Dr. Ed Monty Jr. Dr. Monty was hired on a sub-contract from the University of Arizona. His assignment was originally for 24 months. However, Dr. Monty served as COP for approximately one year after Dr.Maughan left; and in addition, he extended his time by 2 months in order to complete the purchase, installation, and calibration of equipment for the veterinary parasitology diagnostic laboratory. His assignment totaled 26 months, and his report is No.17.

Dr. Monty's technical assistance activities centered around animal health activities of the institute, in the classroom, and

health maintenance of the farm herds and flocks. He taught some specific classes, assisted animal scientists with development of classroom materials, and gave clinics in animal disease diagnosis and animal health maintenance programs. Dr. Monty was the veterinary advisor to the farm manager and assisted in all aspects of teaching, research and extension of the institute faculty. Where possible and appropriate, he provided extension veterinary services to dairy farmers in the immediate vicinity of the institute, as a teaching/extension example to the faculty.

The IAAS buffalo herd was utilized by Dr. Monty to start a program of research in buffalo reproductive physiology. Buffalo cows were monitored for estrus (which is seasonal), conception, gestation, parturition, and recycling. He designed and supervised construction of holding pens and restraining equipment and taught the veterinary research faculty the theory and practice of the research.

The planned veterinary parasitology diagnostic laboratory was established by Dr.Monty. A building was refurbished, equipment which was paid for by the World Bank was purchased through USU, installed and calibrated by Dr. Monty. A TDY consultant, Dr. Tom Galvin, was retained for one month to instruct IAAS faculty and technicians in parasitology, diagnosis, laboratory procedures and analysis, and maintenance of laboratory equipment. Capability was developed for the analysis, detection, and diagnosis, of fecal, blood, and external parasites.

Dr. Monty participated in the seminars and workshops sponsored

by IAAS department and Utah State University.

4. Academic Administration Advisor

The position of academic administration advisor was filled by Dr. Clark Ballard in the first two years of the contract and by Dr. James Ogg during the final three years.

The contract required continuing periodic visits by the advisor and was intended to provide direct assistance to the senior administrative officials of IAAS in all aspects of institute management, policy, and planning. From the outset this advisor was not allowed to advise on matters dealing with students, personnel, or finances.

The advisor was asked to help with a fifteen-year plan for the institute leading to autonomy from Tribhuvan University and development into a center of research and teaching excellence in the region. Included in this plan was a quota and scholarship program for encouraging female students to register and study agriculture and home science at IAAS. Action plans were developed for many of the departments but overall impact on administrative issues was negligible.

The academic administration advisor worked out plans for a Royal Charter (for autonomy), a curriculum and plan to offer a Master of Science degree in agriculture science, and a plan to obtain research support from national and international donor agencies.

Political upheaval and student unrest and demonstrations led

to frequent changes of administrative officials. The dean's position was held by four different people during the five years of the contract and re-organization and shifting of positions due to faculty taking study leave caused continual frustration in attempting to achieve the goals of the advisors' position. During the first three years considerable progress was made--after that the advisor found it increasingly more difficult to be effective. During the last two years the IAAS Dean requested more frequent and longer TDY visits by the academic administration advisor, and there was a tendency for the IAAS administration to rely on the advisor for guidance on issues outside the contract terms while neglecting previously agreed upon activities.

The political ambience in Nepal changed dramatically during the final year of the contract. Most plans and programs were seriously disrupted and the academic future of IAAS was very much in doubt.

The academic administration advisor also helped develop a program for continued activity after the IAAS-II contract concluded. This was under the auspices of an AID sponsored Continuing Linkage Program (CLP) and featured 100 percent matching contributions from AID and the U.S. universities and 25 percent matching from IAAS. Academic and research linkages were to be maintained between IAAS faculty and U.S. university faculty. AID funds were identified to provide $100,000 each year for five years plus the institution's matching brought the total planned support to $1,125,000. The aforementioned political upheaval and resulting

administration changes resulted in postponement of the CLP indefinitely.

Dr. Ballards reports are Nos. 1, 4, 9, and 14. Dr Oggs reports are Nos. 20, 22, 26, 28, and 32.

5. Consultants

U.S. and regional consultants performed services for the contract in needed fields of expertise. The PP and RFTP identified specific areas of expertise, but IAAS administration requested and obtained approval for experts in a number of alternative areas. The following is a list of consultants, times, subject matter, and the number of the consultants' TDY report:

SUBJECT MATTER	CONSULTANT	DATE	REPORT NO.
1. Dairy Science	P. Jelen	June 86	5
2. Farm Livestock	R. Stevens	Aug 86	6
3. Status/Benchmark	W. Maughan et.al.	Aug 86	7
4. Pomology	S. Ram	Oct-Dec 86	10
5. IAAS Grad. Study	R. Robson	Nov-Dec 86	11
6. Vet. Parasitology	T. Galvin	Jan-Feb 88	18
7. Ag. Botany	A. Srivastrava	Apr-May 88	21
8. Ag. Extension	D. Williams	Jul-Aug 88	23
9. Women In Develop.	S. Tisch	Feb-Jun 89	29
10. Women In Develop.	S. Tisch	Sep-Oct 89	30
11. Aquaculture	D. Moss	Nov 89	33
12. Women In Develop	A. Holman	Sep 89-Feb 90	34

6. Visiting Scholar Program

The plan of work and budget provided for three visiting scholars. A national search was conducted in the U.S. by USU, and Dr. Dennis Timlin was selected to work with the IAAS in agronomy and soil moisture management. His assignment lasted 12 months, and his report is No.24.

Further search for additional scholars through U.S. Consortia and the AASCU of NASULGIC proved unfruitful and no other scholars were found. Unused funds from this program were diverted to Women in Farming (WIF) and Women in Development(WID) activities.

7. Women In Development/Women In Farming Programs

When it became evident that there would be funds available from the Visiting Scholar program, USAID/N requested that USU provide support to a WID program at IAAS through the contract. The Consortium for International Development(CID), a group of 11 Western U.S. Universities, provided salary support through their Women In Development contract, while the IAAS-II contract provided travel, incountry support and logistics.

Dr. Sarah Tisch from Washington State University and Dr. Ann Holman from the University of California State Polytechnic University at Pomona provided expert services in developing scopes of work for womens programs in farming and other gender related issues. Two workshops were held during the TDYs, which were very successful in highlighting womens issues related to the region.

Funds were also used to provide a number of "internships" for

IAAS women students to work with the experts to develop appropriate womens extension programs. Funds were further expended in implementation of the interns projects in the field.

These programs were evaluated by USAID/N and were considered to be very worthwhile in that they also provided the women students at IAAS with a vision of the problems women face in the overall development of the region.

Additional WID and WIF programs were planned for subsequent years, but when the IAAS-II contract ended the programs were discontinued.

Dr. Tisch has two consultancies. Her reports are Nos.29 and 30. Dr. Holmans report is No. 34.

C. Training

1. Academic (degree) Training

The original plan of ten participants was expanded to fifteen as explained in Section III. The training was all planned to start by September of 1986. This schedule would allow M.S. candidates to finish by September of 1988 and Ph.D. candidates by September of 1989. The graduates would then have at least one and possibly two full years of post graduate experience with the U.S. advisors before the contract ended.

The proposed fields of study and criteria for candidate selection were disputed at length by departments and potential candidates. Serious delays were experienced in all but one case.

In August of 1986 the first participant was selected: and it was May of 1988 before the remainder were all finally selected. Candidates were accepted at the University of Philippines at Los Banos (UPLB,) Central Luzon State University in the Philippines (CLSU), University of Pertainian in Malaysia (UPM) and at Iowa State University (ISU). The list of participants, field, degree, and location follows.

PARTICIPANT	FIELD	DEGREE	LOCATION
1. Narayan Kunwar	Extension Ed.	PHD	ISU
2. Durga D. Dhakal	Horticulture	PHD	UPLB
3. Resham B. Thapa	Entomology	PHD	"
4. Rishi R. Adhikari	Horticulture	PHD	"
5. Mohan Kharel	An. Breeding	PHD	"
6. Shree C. Shah	Soil Science	PHD	UPM
7. Purandhar Dhital	Extension Ed.	MS	UPLB
8. Ramesh R. Pokharel	Plant Path.	MS	"
9. Rabi Poudel	Rural Sociol.	MS	"
10. Ashutosh R. Sukla	Ag. Engineer.	ME	"
11. Bir B. Thapa	Soil Science	MS	"
12. Shyam S. Jha	An. Science	MS	CLSU
13. Devendra R. Adhikari	Entomology	MS	"
14. Mohan P. Sharma	An. Breeding	MS	"
15. Arbind K. Singh	Aquaculture	MS	"

At the end of the contract only one participant had finished his degree and returned to IAAS.

2. Exchange Scholars

Three opportunities for senior faculty members at IAAS were provided in this category.

a. Dr. Fanendra Neupane, entomologist, spent six months at the University of Wisconsin (Madison) working on insect resistance in plants. He stayed an additional six months supported by other funds. Three scientific publications resulted from his efforts.

b. Dr. Nanda Mishra, agronomist, spent three months at Utah State University and three months on a study tour of six other research institutions.

c. Dr. Tej Bahadur K.C., soil scientist, spent six months at the University of Wisconsin studying the effects of boron application on plants.

3. Short term technical training

Eighteen participants were selected for technical training in specific disciplines. The training ranged from one to three months and occurred in a number of locations. The participants, discipline, and location are listed below.

PARTICIPANT	FIELD	LOCATION
1. Indra P. Regmi	Library Science	UPLB
2. Buddhi K. Shrestra	Library Science	"
3. Mohan P. Sharma	Farm Management	UPM
4. Sudarshan Tiwari	Farm Management	"
5. Kashi Nath Devkota	Personnel Man.	"
6. Buddha S. Tiwari	Acc. and Budgets	"

7.	Ram C. Koirala	Farm Management	UPLB
8.	Moti Lal Prasad	Farm Management	"
9.	Durga Mani Gautam	Hostel Management	"
10.	Binaya P. Tiwari	Vet. Pathology	Vet.Res.Inst. Malaysia
11.	Krishna R. Tiwari	Proj. Analysis	Colorado State Univ.
12.	Thakkan Mallick	Computer Science	Utah State University
13.	Sadeo Sah	Dairy Processing	Utah State University
14.	Usha Jha	Bio-Chemistry	UPLB
15.	Ganga L. Shrestha	Records Systems	CLSU
16.	Keshab P. Shrestha	Acc. and Budgets	"
17.	Puspa R. Jamarkatel	Stores&Inventories	"
18.	Bhim B Thapa	Acc. and Budgets	"

4. <u>Incountry Training</u>

Opportunities for 106 participants were provided in Nepal for skills training. The number of participants and skills are listed below. All training was done in Nepal at appropriate locations.

FIELD/SKILL	NUMBER TRAINED
1. Financial Management	9
2. Office Management	10
3. Electricity	5
4. Plumbing	5
5. Op.& Maint. Lab. Equipment	13
6. Audio-visual Aids	8
7. Computer/wordprocessing	10
8. Typewriter & Dupl. Maint.	11
9. Auto/motor Mechanics	14
10. Farm Planning/Design	10
11. Games and Sports	1
12. Book Binding	2
13. Security Guard	8
TOTAL	106

5. Workshops and Seminars

a. In September of 1986 a pedagogy workshop was held at Rampur. The entire faculty of IAAS from all three campuses participated. Presentations were made in use of audio visuals, different methods of classroom instruction, the use of practicals in laboratories, and evaluation of instruction.

b. In March of 1988 a second workshop was held at Pokhara with emphasis on statistical methods in research. An outside expert gave a full day of instruction in statistical theory and practice. A second day was devoted to pedagogy.

c. A total of seven seminars were given by visiting professors, administrators, and consultants.

i. Dr. Val Christensen - Educational Philosophy and Human Relations

ii. Dr. Doyle Matthews - New Developments in Ag. Research

iii. Dr. R. Dean Plowman - Potential for Increased Milk Production for Nepal

iv. Dr. P. Jilen - Milk Processing

v. Dr. Robert Stevens - Ag. Economics

vi. Dr. Sant Ram - Botany and Horticulture

vii. Dr. James Thomas - Theory and Principles of Research Administration

6. Shortcourses

i. In May-June of 1987 a selected group of 16 IAAS lecturers attended a course on "Effective Classroom Instruction". Specialists

from IAAS, Tribhuvan University, and the private sector gave practical instruction for a two week period. Examples were utilized from 10 different subject matter areas so participants could see application of methods in a variety of courses and teaching situations. The course was held at Pakhliawa campus. In

ii. In May of 1988 a short course was taught at Pakhribas Agricultural Center. This shortcourse was to familiarize 20 selected IAAS faculty from all campuses with the best methods to teach research methods to students.

7. Travel grants

Activities associated with training included travel grants given to IAAS faculty member who obtained funding outside the contract to pursue graduate training but which did not include travel funds. The five faculty listed below received travel grants.

i. Ganesh M.S. Adhikari PHD Michigan State Univ.

ii. Ganesh P. Shivakoti PHD Michigan State Univ.

iii. Murari P. Suvedi PHD Michigan State Univ.

iv. Jaya R. Joshi PHD Univ. of Minnesota

v. Neeraj N. Joshi non acad. Univ. of Netherlands

In addition, other members of the IAAS faculty who were away from Nepal studying on previously obtained scholarships were also offered travel grants to encourage them to return to IAAS. At the conclusion of the contract a total of 3 such grants had been given.

Some funds were identified as being available for faculty to attend international seminars and conferences to which they had

been invited and had a scientific paper accepted for presentation. Only papers prepared as a result of recent research done was accepted as valid for receiving the travel grant. Participating faculty are listed below.

i.	Bhola N. Pokheral	Ag. Econ. Conf.	Argentina
ii.	Krishna P. Sharma	World Soybean Conf.	Argentina
iii.	Fanendra P. Neupane	Trop. Entomology	Kenya
iv.	Lakshmi P. Subedi	Plant Breeding Conf.	Japan

V. FINANCIAL REPORT

A. Management

Funds were authorized by a letter of credit arrangement between AID/W and USU. Expenditures and payments were made through Utah State University controller's office for all on-campus and U.S. activities. Accounting and auditing was performed by the controller's office and day-to-day operations were handled by the project coordinators office in the College of Agriculture.

For the incountry activities the office in Rampur handled all financial transactions and accounting. Monthly financial reports were prepared in Nepal and sent to USU for reconciliation and preparation of billings. To facilitate the incountry operation, bank accounts were established under USU control in Logan, Utah, (for dollars) and in Kathmandu (one dollar and one rupee account).

Billings to AID were submitted periodically for payment.

B. **Expenditures**

The following table gives expenditures by budget line item showing totals for TA, training, and indirect costs. A total of $2,380,823.30 was unexpended at the end of the contract representing 97.2 percent of the total budget. Further details are available in the monthly and semi-annual reports.

EXPENDITURE

Category	Amount($)
I. Technical Assistance	
1. O/S Salaries/benefits/allowances....	264,688.53
2. Consultants.....	138,991.83
3. Campus Salaries/benefits.....	146,607.39
4. USU Office Support.....	48,178,91
5. Nepal Office Support.....	171,527.71
6. Travel and Transportation.....	336,243.24
7. Other Direct Costs.....	362,683.12
8. Indirect Costs.....	427,202.82
II. Training	
1. U.S. and Regional.....	451,094.76
2. In Country (Nepal).....	33,904.99
III. TOTAL EXPENDITURES.....	2,380,823.30

The original budget was amended twice moving funds from salaries, consultants, and indirect cost categories to other direct costs, Nepal support costs, and training. The latter categories

changed significantly when 50 percent more training positions were added and travel costs associated with training were included in the training line item. Nepal support costs increased dramatically due to mandated salary increases and the Women in Development and Women In Farming programs which were added.

Further details are available in the monthly financial reports and the semi-annual technical reports.

VI. OBSERVATIONS

A list of recommendations which would improve IAAS at this time would amount to an exhaustive treatise on everything that makes an educational institution viable and worthwhile. At this time(1990-1991) there is very little that is being done that is constructive or relevant. The underlying goal of the GON in establishing the IAAS, i.e. to provide a quality agricultural Education Institution for Nepal, has not been realized. There is ample evidence that under present conditions it will not be realized in the near future. The reasons are recognizable and are many, but in the context of the present and immediate past political, social, and economic conditions, it is entirely understandable.

IAAS has not developed into a quality educational and research institution because of several major and many minor constraints. A complete listing would be a lengthy litany of grievances and complaints. However, the major constraints include:

1. Physical isolation of the campus and professional isolation

of the faculty.

2. Political appointment of administrators and constant intervention and disruption of administrative matters by students and non-students.

3. Rampant, and seemingly uncaring, faculty absenteeism when classes are in session.

4. Lack of incentives for faculty. These include but are certainly not limited to:

i. Lack of physical incentives, such as housing, adequate schooling for children, transportation, communications, and health facilities for faculty and families.

ii. Lack of economic incentives, such as extremely low salaries compared to other easily identifiable and obtainable employment opportunities.

iii. Lack of professional incentives such as adequate opportunities to do research, attend professional meetings and being rewarded for quality teaching.

iv. Lack of support from the central government to operate, maintain, and modify the institution as needed.

Under present political and economic conditions there has been and will continue to be a serious problem of faculty resignations to accept better positions both inside and outside Nepal. Massive and continued infusion of funds would solve many of the problems, but would be irrational at this juncture. Changes in administration, policy, and other incentives would also be necessary.

The whole issue of the rationality of IAAS in its present location and current activities should be revisited when there is more stability in the Nepalese government, and when the economic conditions improve to the point that adequate sustained support from the central government is possible.

VII.APPENDIX

REPORTS PUBLISHED

REPORT	TITLE	DATE
1.	Academic Administration Advisor #1	Dec.4, 1985
2.	Work Plan	Feb.1, 1986
3.	First Semi-annual Report	Feb.28, 1986
4.	Academic Administration Advisor #2	Apr.16, 1986
5.	Dairy Science Study	Jun.9, 1986
6.	Livestock Farm Economic Study	Aug.6, 1986
7.	Student and Faculty Benchmarks	Aug.31, 1986
8.	Second Semi-annual Report	Aug.31, 1986
9.	Academic Administration Advisor #3	Dec.4, 1986
10.	Pomology Study	Dec.4, 1986
11.	Study of IAAS Graduates	Dec.15, 1996
12.	Third Semi-annual Report	Feb.28, 1987
13.	Dr. Wesley T. Maughan ETR	Mar.21, 1987
14.	Academic Administration Advisor #4	Apr.5, 1987
15.	Fourth Semi-annual Report	Aug.31, 1987
16.	Dr. Robert C Thompson ETR	Sep.11, 1987

17.	Dr. Dewey E. Monty ETR	Jan.21, 1988
18.	Veterinary Parasitology Study	Jan.20, 1988
19.	Fifth Semi-annual Report	Feb.29, 1988
20.	Academic Administration Advisor #5	Feb.23, 1988
21.	Agricultural Botany Study	May.24, 1988
22.	Academic Administration Advisor #6	Jun.30, 1988
23.	Agriculture Extension Consultant	Aug.1, 1988
24.	Dr. Dennis J. Timlin ETR	Aug.25, 1988
25.	Sixth Semi-annual Report	Aug.31, 1988
26.	Academic Administration Advisor #7	Dec.15, 1988
27.	Seventh Semi-annual Report	Feb.28, 1989
28.	Academic Administration Advisor #8	May.31, 1989
29.	CID Women in Development	Jun.15, 1989
30.	CID Women in Development	undated
31.	Eighth Semi-annual Report	Aug.31, 1989
32.	Academic Administration Advisor #9	Nov.30, 1989
33.	Acquaculture Consultant	Nov.30, 1989
34.	CID Women In Development	Mar.30, 1989
35.	Ninth Semi-annual Report	Feb.28, 1990
36.	Final Contract Report of Activities	Nov.15, 1990