

**NEPAL**  
**PROGRESS REPORT**

for the period  
January 1 to June 30, 1982  
**DEVELOPMENT OF IAAS**

**Project 367-11-110-102**  
**Contract AID/NESA-C-1197**

AGENCY FOR INTERNATIONAL DEVELOPMENT  
IN COOPERATION WITH  
MIDWEST UNIVERSITIES CONSORTIUM FOR INTERNATIONAL ACTIVITIES, INC.\*

\* Members are: University of Illinois, Indiana University, University of Iowa, Michigan State University, University of Minnesota, The Ohio State University, and the University of Wisconsin.

## PROGRESS REPORT

January 1, 1982 to June 30, 1982

Dr. Garland P. Wood\*

### INTRODUCTION

Organizations and institutions are man created to accomplish certain goals and objectives. The creation of such structures requires investment in terms of inputs of time, money, equipment etc. The organization to exist needs inputs. If the organization does not satisfy its sustaining clientele or find new clientele to replace them it will die. IAAS is one such institution. It is legitimized by the power of His Majesty's Government under the umbrella of Tribhuvan University. It absorbs inputs of equipment, faculty support, staff consultants, students and budgeted funds. Within its organization are operating procedures and guidelines that are intended to act as catalysts to allow it to produce certain outputs. These outputs in the case of IAAS are trained students, research results, extension services, shared knowledge with sister institutions and sometimes transferred faculty.

Institutional Network: Nepal is developing an intricate network of formal and informal institutions. These institutions range from a national planning commission, a new department of forestry, new credit banks for agriculture, business men's associations and a teachers association for faculty of higher education. Each institution has its own reason for being and in its dynamics of growth or changing clientele it intrudes on other institutions' turf.

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Such turf struggles require alert leadership to handle such interface relationships before they endanger the existing balance of institutions.

Leadership: IAAS is now in a growth stage that requires leadership sensitive to the dynamics and dangers of institutional ambitions and jealousies. For example other institutes and campuses under the Tribhuvan University umbrella see the rapid expansion in the IAAS budget as a threat to their own budget aspirations. The planning commission is anxious that the training of manpower specified in the sixth five year plan for IAAS shall be met and the commission supports inputs for IAAS needed to meet these objectives. Other IMC departments see the research thrust of IAAS faculty as competitive and sometimes threatening to their own former monopoly in the field.

The Political abiente: Before I turn to the specifics of IAAS changes over the January 1 - June 30 period I'll touch on political developments in Nepal. For the past three years political activities have disrupted teaching activities throughout Nepal but especially at IAAS. Nepal has now entered a much quieter political period but several students lost their lives on nearby campuses during the period of this report and one nearly died from a beating at IAAS. There will be no diploma students in their senior year during the academic year ahead as a result of previous extended student strikes. Firm action by Acting Dean Joshi has had a quieting effect on student activities. Most students now on campus appear to be eager to study and make up for lost study time .

#### I - IAAS INPUTS

Tribhuvan University: Serves as the enabling legitimizing body for IAAS.

Funds are disbursed through the ministry of education to Tribhuvan University. Tribhuvan University apportions the funds to the various institutes and campuses on the basis of accepted budgets and judgements of officials of T.U. The doubling of this years budget over last was due to the effective presentation of IAAS financial needs by Acting Dean Joshi to responsible T.U. Officials. It was also a reflection of the forceful point made at the 4th JAR that an agricultural dominated Nepal needs at least one first class Agricultural Institute or University.

MUCIA/USAID: This contract funding serves as another major input to IAAS. The present rate of expenditures is about \$61,000 per month. This covers long and short term consultants, equipment, books, back up personnel in East Lansing, participants training in the Philippines and the U.S. and research support for IAAS faculty. The fund also provides the support staff and equipment for the MUCIA team in Nepal. As of the date of this printing in Mid September the campus coordinator's financial and activity report from Michigan State University had not arrived.

USAID/N Campus Development Project: This project fund was and still is the major input for the building of dormitories, classrooms, laboratories, library, clinic, mess hall, and the equipping of these facilities. It has covered the cost of infrastructures for IAAS including, sewer, drainage and water systems plus a road and walkway network. Agricultural Engineering and south farm field buildings have also been provided. It should be noted that Nepal has made a major investment in the institute in lands, offices, dormitory and faculty housing plus the preparatory training of its faculty.

Equipment and Supplies: Logistical support items such as diesel fuel,

Petrol, Propane and repair materials for houses are purchased locally or in Kathmandu. Research support items for the IAAS faculty are also purchased in Nepal. There is a wide range of equipment and supplies needed by this Agricultural Institute which are required by USAID contract to be purchased in the U.S.A., if purchased by USAID funds. This involves a long drawn out process of drafting purchase orders, getting them assembled in the states and then the patience test of getting them through customs in Calcutta and through the Nepal, India customs officials. During the six months period of this report \$ 32,000 of supplies were received in Nepal. Shipping costs roughly double the value of such items. During the same period six orders totaling \$ 8,500 were sent to the states for processing. During this report and in future periods an increased volume of books, machines and equipment will be purchased in Nepal.

Consultants and Contract visitors: Dr. Weslie Combs came to Nepal in January as a short term consultant to the livestock department. He and his wife Pat spent six weeks in Nepal. During that time he conducted a series of seminars and drafted an extensive end of tour report. He is expected to serve as a long term consultant to IAAS beginning about October 1, 1982.

Dr. Flinn, MUCIA Executive Director, visited the Project in early April to discuss the final phase of the MUCIA/USAID N contract.

I made a short consultant trip to Michigan State University in late May to discuss Administrative and personnel matters of the project.

Dr. Kim Wilson, Michigan State University and Dr. Andy Sofranko of the University of Illinois came to Nepal during the last two weeks of June to

draft a plan of work for the last two years of the contract. This required an intensive period of involvement of Dean Nanda Joshi and myself in providing the background and present data for the report.

Dr. Foth and his wife left Nepal in June to return to MSU.

Faculty: Like the tide returning to shore the faculty are now returning to IAAS.

From the Philippines Mr. Murari Subedi returned with a masters degree in Extension and Education. Seven IAAS faculty still remain at Las Banos working on their masters degree. Two of our senior faculty returned from the United States. Mr. Tej Bahadur K.C. returned with a Ph.D. in Soil Chemistry from the University of Wisconsin. Mr. Fanindra Neupane returned to Nepal with a Ph.D. in Entomology, also from the University of Wisconsin. Several faculty in India under USAID scholarships have also returned recently. The returning participants from India were: Mr. Chandra Kishore Mandal with an M.Sc. in Entomology, Mr. Deo Nath Yadav with an M.Sc. in Agronomy, Mr. Jagat Lal Yadav with an M.Sc. in Animal Science and Mr. Sudarshan Tiwari from training in Animal Husbandary.

We have been intensively exploring the possibilities for financial support for Mr. Nanda Joshi and Gyan Srestha to pursue Ph.D. training in their respective fields of Livestock Science and Horticulture. USAID/N would not agree to fund such training since such training would likely go beyond the end of the present contract which terminates September 30th. 1984. We have also been trying to place Mr. B.B. Basnyat in a master's program in Ag. Engineering. Our efforts to enroll him at Las Banos has met an unbelievable string of communications failures. We are now exploring the possibilities of the Asian Institute of Technology at Bangkok, Thailand.

Mr. D. D. Dhakal, Chairman of our department of Horticulture was granted an all expense paid trip to attend a two week workshop in teaching methods at Guelph, Canada. From there he traveled to East Lansing and Columbus, Ohio to visit Michigan State University and Ohio State University.

No institution is free of attrition of its personnel and IAAS has lost some faculty but comparatively few. It has also admitted to its ranks new B.Sc. Graduates from its own graduates and those from other institutions.

Students: The other major input is the approximately 400 students taking J.T. and B.Sc. training on the main campus at Rampur. Some 175 students are enrolled in the hill country Campus at Lanjung taking the one year Junior Technical Assistant Training (J.T.A.) program, at the Paklihawa campus 100 kilometers to the west of Rampur some 350 students are enrolled. One hundred fifty students are enrolled in the 1st year J.T.A. program and another 200 in the 2nd year certificate course called the J.T. program.

## II - Within IAAS

Physical facilities: Several major building projects were completed during this report. The new and final classroom under this project was completed and turned over to IAAS. It's numerous windows and good air flow corrects many of the architectural aberrations of earlier classrooms.

The new library building was also completed and turned over to IAAS by the contractor. The library staff moved all books and holdings into the new library during the closure of the campus in June. Metal cabinets and open shelving were ready for the transfer but wooden furniture including study desks and chairs are still not ready. Over one year ago Mrs. Wood gave the photo designs to the Project Manager for the wooden furniture including control desks, card catalog file cabinet, chairs and tables. The new library is a handsome building and should be very functional when all equipment is in place.

The old dormitory is still being renovated. The bathroom section on the East end of the building was torn down and has now been replaced by new facilities. The west end bathrooms are in a similar state of collapse and will need to be replaced. Structural defects and weaknesses within the building have now been corrected. The Campus Development Committee has decided to proceed with wiring, securing of the first floor veranda and renovation within the rooms. This dormitory plus the new ones already constructed will house the now projected 400 to 450 students on the Rampur Campus.

Sewer and drainage system work was continued during this period. The construction work will be discontinued during the monsoon period and should be completed during the fall. Installation of the water system was stopped due to lack of pipe and fittings. A 130ft. well was drilled and tested as adequate for the needs of the campus. Cement walkways have now been nearly completed lacking only the connecting areas to the main vehicular road. Curbs and base material are already in place on the vehicular road. The final black top coat will be put in place after the monsoons are over.

A high tension line has now been built to the livestock farm. As soon as the present transformer can be released from the main campus and transferred to the livestock farm some important changes can be made in the livestock farm. Water can be pumped up into the water tower so that livestock and families have an adequate supply of water. Adequate electricity will allow the livestock faculty and staff to use grinding and mixing equipment for preparation of balanced livestock rations. It will also allow the use of electrical equipment for research in present laboratories and those

laboratories budgeted for the year ahead.

The decision has now been made to have IAAS maintain responsibilities for the two satellite campuses at Paklihawa and Lamjung. The new IAAS budget beginning July 15, 1982 has earmarked funds and these plus MUCIA funds will be expended at these campuses. I will cover the current physical facilities of the two satellite campuses and their projected needs in the next progress report.

The Incentive System: The penalty reward system follows T.U. guidelines. Seniority dominates promotion and recognition decisions. There is little flexibility to reward the productive scholar or teacher. Who you are seems to be more important than what you know. Job specification and evaluation procedures are discussed but not implemented.

However, we are working to raise the staff morale where flexibility is permitted. Better housing, better equipped laboratories and classrooms, possible attendance at international conferences, availability of research funds, an opportunity to interact with other professionals in Nepal all are being given attention so as to improve morale and the productivity of our faculty.

IAAS has upgraded the quality and quantity of support services available. Typists, electricians, plumbers, mechanics and field worker improve the working and living conditions at Rampur. An apple II Computer has been installed to make available in Rampur statistical analysis capabilities. Clearance has been requested to make available the latest copier machine for the reproduction and publication center.

Maintenance: Maintenance of buildings and equipment has been almost non-existent in recent years. The doubling of this years IAAS budget over

last has permitted a reasonable maintenance fund to be set aside. One needs to be watchful that this fund isn't sidetracked into road building or some operating expenditure rather than maintenance.

Library Services: A library is perhaps the best of all indicators of the intellectual health of an education institution. It is the conservatory of mans accumulated knowledge. It is the repository of mans on going research for knowledge of nature and himself.

Through an effective library the student has vistas of the world about him. For the scholar there are the shared questions and hypothesis for the seekers in his field of concern.

I used the word effective, for a library without order and organization is a waste of effort and money. The library of IAAS was mainly wasted effort and money until January 1981. The cataloging of books, pamphlets and journal has brought order out of chaos. Students and faculty are beginning to use the library, now that there is a system for gaining access to its information sources. Much money has been invested in the new library building and much money is being invested in books, journals, furniture and equipment. But unless additional trained staff are put in place to order and catalog new books, seek out fugitive materials and maintain current journal collections then IAAS will have lost one of its most critical resources. It will almost certainly lose its support base for being a number one educational institution.

During the six months period of this report 706 books were purchased, catalogued and added to the library collection. One hundred thirty five volumes were bound in Kathmandu and catalogued. Hundreds of fugitive

material articles were also indexed and filed.

Linkage with Tribhuvan University: The expected reorganization of higher education in Nepal has not taken place. A Royal Commission has now been appointed by the King to study all facets of the higher education needs of Nepal including linkages with international education institutions. The commission has up to one year to make its study. Implementation procedures and decisions would come later. We at IAAS now believe few structural changes will be made towards autonomy for the institution until after the commission's report is submitted. Additional decision making power may be granted to the IAAS Dean during this waiting period by the Vice Chancellor.

Linkages with other Institutions: Initial contacts have been made with the department of forestry for possible sharing of faculty to strengthen respective course offerings where one's own faculty may lack expertise. Joint seminars are being held with staff of the National Maize Farm located across the road from the Rampur Campus. Our faculty attend workshops offered by the different research stations of the department of Agriculture. At such meetings our faculty present research papers and enter the discussions.

Support Linkages: The faculty and the administration have continued their efforts to secure multiple funding support for IAAS; Two sources have already been identified in this report, Tribhuvan University funds and MSCIA/USAID N Contract funds. Additional funds have now been committed by the Chitwan Irrigation Fund for the development of the Livestock Farm. Mr. Joshi and I have also made contacts with various other funding agencies. As of now it seems quite certain that several millions of dollars of a World Bank loan to Nepal would be used to improve and expand the training

facilities of IAAS. This would take place at both Rampur and the satellite campuses.

### III - IAAS PRODUCTS

IAAS justifies its existence on the basis of performing three main functions or tasks of teaching, extension and research. The products or results of such efforts are: trained workers and students; services and shared knowledge with the farmers and agroindustries of Nepal; new information gained from research that is useful in Nepal and to fellow scientists in other countries.

Teaching: During the past six months 250 J.T.s have finished their training and left the Rampur Campus. The third group of B.Sc. graduates from IAAS would have finished their training during this period except for the attack on a student that caused the campus to be closed by the police. Final exams will be delayed until the campus reopens. Some 90 students will graduate in this class.

Extension: A successful farmer's day was held in early March with over 300 farmers and community leaders on campus. They viewed the demonstration plots, talked to our faculty on diseases of plants and animals, took soyabean seeds and cassava shoots back to their farms for planting.

Faculty have visited farmers fields to diagnose insect and disease problems. Sometimes the problem requires soil analysis to detect trace mineral deficiencies. Demonstration plots are established in farmers fields to test new or introduced plant varieties and see their adaptability on the farmers field. Water buffalo and cows are brought to the livestock farm to breed with high quality bulls. A Pilot Extension program has been established in an adjoining Panchayat. The nature of the project is discussed

in the pamphlet titled The IAAS Pilot Extension Program of Shardanagar Panchayat written by S. B. Gurung and G.P. Wood. This publication is available on request.

Research: Research procedures and guidelines were discussed in the previous progress report covering the period July 1 - Dec. 31, 1981. I expect to publish a report on the MUCIA/IAAS research activities to date in October so I will only briefly list the projects funded by MUCIA during the January 1 - June 30, 1982 period.

1. Duck Cum Fish Culture Research: Principle researcher, K.T. Augusthy in collaboration with M.K. Shrestha. In this study, the researchers will test the economic viability of a duck/fish pond culture and examine the impacts of various food sources for ducks and fish on their growth rates.
2. Soyabean Research and Extension in Chitwan: Principle researcher, K.P. Sharma in collaboration with S.P. Katel, S.B. Gurung, S.M. Shrestha, S.C. Shah and R. Poudel. Several research activities will be conducted, one which is to test the hypothesis that low initial seed moisture content and seed storage conditions are more critical factors than genotypes and duration of storage in preserving soyabean seed viability.
3. A case Study of the Farming Systems of Shardanagar Panchayat: Principle researcher, P.M. Tulachan. The researcher will conduct a baseline study of farming systems in the Shardanagar Panchayat to identify current practices and socio-economic and physical constraints faced by farmers. This materials will be used to develop a farming systems handbook to be used as a reference by researchers and planners and in the agricultural

economics curriculum. This is a multi disciplinary study and includes the following collaborators: Drs. Garland P. Wood and Roger Montgomery, Ag. Economists. Mr. S.B. Gurung, Extension Chief, Mr. J.R. Joshi Soil Scientist, Dr. K.R. Tiwari Animal Scientist, Mr. Ganesh Shivakoti Ag. Economist.

4. Mapping and Characterization of Major Soils of the IAAS Farm at Rampur: Principle researcher, B. R. Khakural in collaboration with J.R. Joshi. A complete mapping of soils on the IAAS farm and their classification according to physical and chemical properties will be done to aid in the placement of experimental plots to determine the applicability of research results to other farms.
5. Evaluation of the B.Sc. (Ag.) Program at IAAS, Rampur: Principle researchers, B. N. Pokharel and G. P. Shivakoti. The researchers will make recommendations for the improvement of the B.Sc. program based on the results of a survey of faculty, students, and former students and their immediate supervisors.
6. Effect of Date of Sowing and Nitrogen Levels on the Incidence of Rice Blast and Leaf Spot at the Nursery Stage: Principle researcher S. M. Shrestha in collaboration with L.N. Bhardwaj, R.B. Chhetry and Moti Lal. In this study, S.M. Shrestha will test the hypothesis that the date of sowing and nitrogen levels are the critical factors affecting the susceptibility of Masuli variety rice seedlings to blast and leaf spot at the nursery stage.
7. Studies of the Effect of Seed Dressing and Foliar Sprays on Seedling Health and Blast and Brown Spot Disease of Paddy: Principle researcher,

L. N. Bhardwaj in collaboration with S. M. Shrestha, M.H. Khan and Moti Lal. This project will test the effectiveness of fungicides in reducing losses of rice seedlings in nursery beds.

8. Studies on Chemical Control of Root-Knot Nematodes of Okra and Eggplant:

Principle researcher, L.N. Bhardwaj in collaboration with S. M. Shrestha and R. C. Koirala. This project will evaluate the effective dose of furadan necessary to control root-knot diseases of okra and eggplant under local conditions.

9. Survey and Identification of Plant Parasitic Nematodes in Chitwan:

Principle researcher, M.H. Khan. The project will identify plant parasitic nematodes associated with vegetables, legumes, fruits, and other economically important crop plants, and their population and distribution in relation with hosts in different localities in Chitwan as a first step towards their control and the prevention of crop losses.

10. Year Round Production of Vegetables in Rampur: Principle researcher,

Rishi R. A. Mikhari in collaboration with Durga D. Bhakal and Ram C. Koirala. The purposes of this project is to develop a planting schedule for year round vegetable production for home consumption and sale by the farmers of Chitwan District.

11. Radio and Other Sources of Information to the Farmers in the Chitwan

District of Nepal: Principle researcher Mr. Narayan Kunwar. The research will identify and evaluate the various sources and channels of Agricultural information that forms a communication network around farmers. It will test the effectiveness and applicability of the radio forum concept in Nepal. It will allow the involvement of IAAS diploma students in radio forums as a requirement of practical work in Agricultural information courses.

12. To Study the Effect of Levels of Rice Polishings on the Performance of Growing and Finishing Pigs: Principle researcher, Mr. Sahadeo Sah. Collaborator Dr. K. R. Tiwari. The purpose is to study the substitution effects of rice polishings versus yellow maize on pig growth up to six months of age. Maize is a major human food source in Nepal and is needed for direct human consumption.
13. Study on Different Methods of Storing Perishable Fruits and Vegetables: Principle researcher, Mr. Rishi Adhikari. Purpose to find cheap, easy methods of storing vegetables and fruits. The data will be used in extension efforts, in classroom instruction and published for use by researchers outside IAAS.

Publications during this period

1. A Proposal Prospectus For the Development of the Department of Animal Science at IAAS: End of Tour Report of short term animal science advisor Dr. Weslie Combs.
2. End of Tour Report: Dr. Henry Foth Long Term Advisor for Plant and Soil Science
3. Prospects of Aquaculture in Nepal: By K.T. Augusthy, Lecturer Fisheries and Zoology IAAS.
4. The IAAS Pilot Extension Program of Sharadanagar Panchayat: By S. B. Gurung Coordinator, Pilot Extension Project IAAS and Dr. Garland Wood.

IV - Conclusion

IAAS is now in its adolescence stage of growth. It has some of the physical adolescence strengths in terms of landed resources, livestock, richly endowed