

International Agriculture Programs
KANSAS STATE UNIVERSITY

Sixteen Years In India

a terminal report





Pioneer team member, Dr. F. W. Albertson, Agronomist and specialist in grasslands, surveys over grazed conditions at Rajkot.

Foreword

India and Kansas State University have been linked together since 1954. It began when the U.S. Government, through its International Cooperation Agency, requested several Land Grant universities to assist in a project to help this new nation increase food production by strengthening its agricultural institutions.

In August, 1972, while India celebrated its 25th year of independence, Kansas State completed its part of this program. The actual work had taken sixteen years (1956-1972) and involved sending 59 faculty members to India. Many more supported the project on the campus at Manhattan.

The problems facing the government of India were enormous. Prior to independence, the country was largely one of self-sustaining villages in which traditional agriculture, based on many centuries of experience, was not a business but a way of life. Indian leaders and visiting specialists recognized that the country's agricultural practices must be modernized if they were to produce enough food to meet the needs of its vastly expanding population, one-sixth of all the people on our earth.

Today agriculture and its allied industries provide a living for 70 percent of the Indian people and account for nearly half of India's national income. Besides providing food for the more than 600 million inhabitants and raw materials for major industries, export of farm products accounts for one-third of India's foreign exchange income. Popularly called the "Green Revolution," this agricultural miracle has made India a land of hope rather than despair.

Kansas State University is proud of its role in helping with this miracle. It is not possible to review the work of each of the individual team members who labored in India. Their efforts would easily fill a large book. What this report attempts to do is briefly review the overall project. It is at best only a quick summary of sixteen years of sweat, frustration, excitement and accomplishment by a group of dedicated men and women.



Agricultural students listen intently to description of Meteorological station.

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Dr. George Filinger, first chief of party, observes Napier grass experiments.

Improved cultivation practices include use of a simple harrow pulled by bullocks.



The Basic Agreement

The basic agreement between the Government of India and the United States Government, known as Operational Agreement No. 28 or Project 028, was entered into on April 20, 1954. This agreement authorized the formation of inter-institutional contracts to provide assistance to agricultural education. This assistance was to be provided by United States universities working directly with forty-five Indian colleges of agriculture and veterinary science.

Various land-grant universities with their strong agricultural emphasis were contracted by the International Cooperation Agency and were asked to participate in the program. Kansas State was asked to provide assistance in the central region of India in the area made up of the states of Hyderabad, Bombay, Saurashtra, and Kutch. The four other universities consulted were Ohio State University, University of Illinois, Pennsylvania State University (soon replaced by the University of Missouri), and the University of Tennessee. By a supplemental agreement to 028 entered March 30, 1955, each of these five universities was authorized to make contracts to strengthen agricultural institutions in India.

Indo-American Team

While these negotiations were going on early in 1955, the first Joint Indo-American Team on Agricultural Research and Education was appointed by U.S. International Cooperation Agency to make a survey of agricultural and veterinary science institutions over all of India. It was planned that the team's report would be the basis on which to plan the new Technical Cooperation programs.

The Indo-American Team was composed of five Indians and three Americans. One of the Americans was Dr. E. E. Leasure, Kansas State's Dean of Veterinary Medicine. This team traveled extensively in India for three and a half months, visiting agricultural colleges, experiment stations, and veterinary colleges in every Indian state except Assam.

The reports of the group, which were written at Kashmir, in September 1955 were submitted to the Government of India. The team reaffirmed the recommendations of the earlier University Education Commission, but the joint team went further and recommended that the rural universities should be modeled after the land-grant universities of the United States, and the members recommended an agricultural university for each state.

The Program Takes Shape

Dr. Arthur D. Weber, Dean of Agriculture, conferred with the deans and department heads concerned and recommended to President James A. McCain that the Kansas State Board of Regents authorize the College to proceed toward the development of a contract. President McCain supported the proposal as a fine opportunity for Kansas State's involvement on the international scene. The State Board of Regents gave its unanimous approval.

This agreement involved sending Kansas State staff members as advisors to Indian agricultural and veterinary science institutions concerned with instruction, research, and extension. Indian staff members and students could be sent to the United States for training. Money would be allocated to the College for the purchase of books and equipment to improve research and teaching at the Indian institutions.

Under this newly signed agreement, a survey team composed of Associate Dean of Agriculture Dr. Harold Myers and Dr. Roger Smith, Kansas State faculty members with international teaching experience, was sent by the International Cooperation Agency and Kansas State University to make a feasibility survey of the area assigned. Drs. Myers and Smith spent three and one-half weeks in India beginning July 1, 1955. During this time they visited officials of the state governments, including the State Secretaries and Directors of Agriculture, vice chancellors of the universities, principals of the agricultural and veterinary colleges, directors of research stations, and heads of extension training centers. Visits to the various departments of each institution were made and Indian staff members were consulted concerning their work. Everywhere the team was greeted cordially and, according to Dr. Smith, the worst problems as well as the greatest accomplishments were demonstrated.

The survey team returned with a detailed report on the situation and recommendations concerning the new venture. Based on this information and many months of negotiation with U.S. International Cooperation Agency, a contract was finally signed between the Government of the United States of America and Kansas State University of Agriculture and Applied Sciences on March 23, 1956. In this agreement, designated as ICA-W-137, Kansas State agreed to render "technical advice and assistance in the fields of agriculture, animal husbandry, home economics and veterinary science" in the central area of India consisting of the States of Hyderabad, Bombay, Saurashtra, and Kutch.*

The objectives were "to strengthen the institutions in the field of agriculture engaged in education, research and extension and in carrying out laboratory control of products." This was to be accomplished by:

1. Providing the services of specialists.
2. Interchange of staff personnel and advanced students between U.S. and India.
3. Provide field laboratory and classroom equipment, books and journals in support of the specialists' efforts to strengthen the Indian Agricultural program.

Ten colleges of agriculture and veterinary science in this region were approved for assistance by Kansas State under the contract. These were: Colleges of Agriculture in Hyderabad, Poona, Bapatla, Akola, Nagpur and Institute of Agriculture in Anand and Veterinary Colleges in Hyderabad, Tirupati, Bombay and Nagpur. Later, the College of Home Science in Hyderabad, College of Agriculture in Tirupati and Indian Veterinary Research Institute in Izatnagar were included for assistance.

The Early Years

The Pioneers—1956-1958

The first team of specialists began leaving for two-year terms in India during the middle of 1956. Members of this group were as follows:

1. Dr. Geo. A. Filinger (Horticulturist-Group Leader) arrived in India on June 16. He had his office at the Department of Agriculture with the State Horticulturist.

* Later reorganized as the States of Andhra Pradesh, Maharashtra and Gujarat.

2. Dr. Randall C. Hill (Rural Sociologist) arrived July 7. He worked with the Extension Wing, College of Agriculture, Poona.
3. Dr. Earl N. Moore (Poultry Specialist) arrived July 9 and was located at the College of Agriculture, Nagpur.
4. Dr. William H. Chilson (Dairy Specialist) arrived July 19 and was associated with the Institute of Agriculture, Anand.
5. Dr. Edwin R. Hoskins (Extension Training Specialist) arrived July 20 and was posted at the Extension Wing, College of Agriculture, Poona.
6. Dr. F.W. Albertson (Agronomist-Grassland Specialist) arrived September 9 and was with the Soil Conservation Service, Rajkot.
7. Prof. Glenn M. Busset (Extension Training Specialist) arrived October 2 and functioned with the College of Agriculture, Osmania University, Hyderabad.
8. Dr. Roy L. Donahue (Agronomist) reached India November 27 and started work with the College of Agriculture, Nagpur.

Dr. George A. Filinger, who had already been recruited as the Horticulture Advisor, agreed to accept the group leader position. Dr. William F. Pickett, who had been working with programs for foreign visitors and students of the Kansas State School of Agriculture, was chosen as the Home Staff Coordinator to coordinate the activities of the contract on the Kansas State campus. Dr. Roger Smith was chosen as Home Staff Member to assist with the program. These two positions and other necessary home staff positions were established under the contract.

Faced with new and complex problems, considerable time was required for these first staff members to get their families situated, set up offices, meet important people, and study the problems. To further complicate this first team's work, Hyderabad State was dissolved in November, 1956, as were the other old states of the region (Kutch, Saurashtra, etc.). Some state personnel were moved away, often to make room for new officials. Others left voluntarily as the states were shuffled. Frequently, parallel jobs were created in order to employ all the civil servants. On the other hand, the political atmosphere between India and the United States was at a high point due to the recent announcement of Public Law 480. Wheat supplied under this law began to arrive soon after the Team arrived. Another factor in promoting good



Farmers eagerly sought new high yielding seed.

will was the favorable credit Indians gave to the United States for its part in settling the Suez Crisis.

In 1957 an amendment to the contract was agreed upon which provided for sending six Kansas State veterinary scientists to various colleges across India. Drs. I.D. Wilson and R.E. Swope arrived in 1958 and began work at Izatnagar in the state of Uttar Pradesh and Mhow in Madhya Pradesh.

As the first two years drew to a close, the original group of specialists began to return home, being replaced by new members from Kansas State University.* Dr. George Montgomery replaced Dr. Filinger as Chief of Party. Two of the original group, Drs. Moore and Donahue, returned after home leave for another two year term.

Twenty-seven faculty and staff members from Indian colleges had been sent to Kansas State for advanced training during these first two years. As these men returned to their own institutions with a better understanding of the land grant system and U.S. educational procedures, they generated new enthusiasm and interest for change in traditional Indian attitudes towards agriculture.

More than \$420,000 had been spent on books and equipment to help Indian schools do a better job.

Most importantly, these pioneers had made major beginnings in improving research, teaching and extension practices of the colleges and institutions at which they served. They had gained acceptance and set the pattern for those who followed.

The Work Goes On

Under Dr. Montgomery, the office of Chief of Party was moved from the State Department of Agriculture to the campus of the College of Agriculture at Osmania University in Hyderabad. Still widely separated across South Central India the team members continued their efforts to improve agricultural education from Bombay on the Arabian Sea to Bapatla on the Bay of Bengal.

The first woman team member arrived in India in 1959. Miss Mae Baird, a home scientist, took up her post in Anand as Home Science Advisor at the Institute of Agriculture, where a two-year course for farmers' daughters was being established. She helped prepare the

* See Appendix I for a complete list of KSU personnel who served in India.

syllabus and organize the new course. The second six months of her one-year tour was spent at the College of Agriculture, Osmania University, in Hyderabad. Here she worked on planning a home science degree course.

Veterinarians Dr. Wilson and Dr. Swope completed their tours in 1960 and this project was dropped, primarily because of difficulties in recruiting suitable faculty members. During this same year President James A. McCain and Board of Regents member Whitley Austin visited India and reviewed the work being done by Kansas State.

Dr. Montgomery accepted a second two-year assignment as Chief of Party and in July of 1960 moved from Hyderabad to the College of Agriculture at Poona.

Plans for an Agricultural University

In April and May 1961, each cooperating U.S. university was asked to develop plans for its Region through the Third Indian Five Year Plan period, establishing fields of specialization, locations, and prospective number of specialists and participants. Next a conference of Group Leaders was held in New Delhi to consolidate the proposals. During August and September more conferences were held to develop a specific plan at work to be presented at the Conference of Campus Coordinators at Knoxville, later that year. The decision made by the contracting universities was to concentrate at fewer locations, specifically those that had been working toward an agricultural university. Plans were made early in 1962 to provide assistance to those institutions that had passed enabling legislation providing for an agricultural university that was approved by the Agricultural Universities Committee.

This decision was especially appropriate for Kansas State's situation, since Andhra Pradesh had been progressing towards the rural university concept for some time. In 1958, the Minister of Agriculture for Andhra Pradesh took the lead in the decision to establish a rural university at Rajendranagar. This location was adjacent to the Extension Training Institute, and the Cattle Breeding Farm of the Department of Animal Husbandry, in a suburban area of Hyderabad, about fifteen miles from the city's center. The site was selected and land acquired for a campus with a college farm and research plots. The university itself would be developed by phases, beginning with the College



Campus Development Specialist, H. James Miller, reviews campus plans with Dr. Emil C. Fischer, Dean of Architecture and Design at KSU, and Chief of Party, Dr. A. D. Weber.

of Agriculture which would be transferred from Osmania University. Plans were to follow with the Colleges of Veterinary Science, Home Science, and Agricultural Engineering. In 1960 the main building for agriculture, the student hostel, and the residence for the Principal were completed and the first year students transferred from Osmania. Later the other classes were moved. From June, 1961, all programs of the College of Agriculture were carried out from the Rajendranagar campus.

In 1959, the Government of Andhra Pradesh had appointed a special officer to plan legislation for the Agricultural University. All of the Kansas State University team members gave him assistance, particularly Dr. Donahue and Miss Baird, who were in Hyderabad and had special assignments connected with the project. In September, 1960 the Agricultural University Committee was invited to Hyderabad to study the Legislation which had been prepared. The committee returned in December and visited the College of Agriculture, Bapatla, Andhra Veterinary College at Tirupati, and research stations which would become part of the Andhra Pradesh Agricultural University. On January 2, 1961, they proposed changes in the draft legislation with emphasis on integrating teaching, research and extension.

Andhra Pradesh was the only state in the area which had made progress toward an agricultural university, so Kansas State began

to concentrate assistance under the program in this state. Foundations had been laid for a rural university, with Dr. Filinger's assistance, at a very early date. The following summary illustrates the quantity of assistance given through 1960 to help develop the Andhra Pradesh Agricultural University by Kansas State University:

- 5 specialists stationed at Hyderabad (a total of 11 man-years)
- 8 participants from the College of Agriculture, Bapatla
- 18 participants from the staff of the Agricultural and Veterinary Colleges at Hyderabad
- 6 participants from Andhra Veterinary College, Tirupati. Most of the participants received master's degrees, two the doctor of philosophy degree
- \$15,615.98 in books had been supplied to the four colleges
- \$123,706.21 in equipment for teaching and research had been supplied the four colleges.

The bill to authorize the formation of the Andhra Pradesh Agricultural University was introduced in the Andhra Pradesh Legislative Assembly in mid-1961 but had not been acted upon when Dr. Montgomery left his post in 1962.

The University Becomes a Reality

Dr. William F. Pickett succeeded Dr. Montgomery as Chief of Party and his three-year tour was focused on the establishment of Andhra Pradesh Agricultural University. Finally in December of 1963, legislation was enacted by the State government and the Agricultural University was a reality.

The Agricultural University was planned as an autonomous unit consisting of Colleges of Agriculture, Veterinary Science, Home Science, Agricultural Engineering, experiment stations and an extension service. These had all existed for some time under separate departments of government. Most of the colleges were attached to private universities. The purpose of the new university was to increase agricultural production. It would provide teaching, research, and extension services for the rural people of Andhra Pradesh. The following institutions initially became colleges of the University:

College of Agriculture, Rajendranagar, Hyderabad

College of Veterinary Science, Hyderabad

College of Home Science, Hyderabad

College of Agriculture, Bapatla

Andhra Veterinary College, Tirupati

Sri Venkateswara Agricultural College, Tirupati

The state research stations and extension institutions would become part of the University

within three years—the length of delay to be determined by the time necessary to appoint a Director of Extension and a Director of the Agricultural Research Station.

The new university had features unique to Indian educational institutions. The courses were offered on the trimester plan, and some selection of classes would be allowed for students in the last three or four trimesters. A similar course was worked out at Tirupati and Bapatla under one of the existing colleges. Internal evaluation was to be used by the course instructors with grades given at the end of each trimester. A student advisory system would be used. The new system would be adopted by phases so that the students who had already begun a program of study would complete their programs under the old system. Each new class would begin and continue on the new trimester system.

The Kansas State Team played an important part in the change-over because of the experience of its members in similar institutions in the United States. They were capable of teaching the instructors how to teach under the new system. Evaluation, the most baffling part of the new system for Indian instructors, was the subject of meetings and seminars conducted by the Kansas State Team. Team members were involved in nearly every aspect of the University's organization from orders of equipment to campus planning some of its years before the University began to function in July, 1964.

Andhra Pradesh Agricultural University

Changes in the Program

Clearly the change from assisting many institutions to concentrating on one called for a different approach. Two short-term consultants at Andhra Pradesh Agricultural University arrived in 1964. The first, H. James Miller, who reached Hyderabad August 15, was consultant in Campus Development and worked at Rajendranagar and other Indian locations for six months. The other, Gilbert R. Dodge, who had been administrative assistant with the KSU-AID Home Staff, was sent to Andhra Pradesh Agricultural University for two months as Consultant to the Comptroller.

Professor Miller found an immense task awaited him at APAU, since a whole new

campus was to be built on a large tract of ground at Rajendranagar. He found the plans which had been rapidly prepared by the Public Works Department very inadequate. As a result of this evaluation, he found it necessary to convince university officials of the weaknesses in these plans by preparing a set of his own.

Mr. Dodge reviewed the budget and plans at Andhra Pradesh Agricultural University and assisted in preparing estimates of development needs of the University for the next seven years. Special effort was taken to determine the rupee needs to be supplied by AID during the period. Operations and business forms were reviewed and recommendations made before the Consultant to the Comptroller left Hyderabad.



Prime Minister of India, Lal Bahadur Shastri, unveils the plaque inaugurating Andhra Pradesh University in March 1964¹⁵

The Middle Years, 1965-1968

Dr. Arthur D. Weber, former Dean of Agriculture, Vice President and Director of International Activities at Kansas State University, assumed the duties of Chief of Party on October 16, 1965.

Special effort was given to recruiting staff members to serve as advisors to the administrative segment of Andhra Pradesh Agricultural University. It was expected that these new advisors would help in setting up the administrative structure of the University. After each had served two years, the position would be terminated. Team members after this phase were to be specialists in certain specific subject matter fields where the greatest need was apparent. By June of 1966 the posts had been filled. Home Science advisors had been found almost impossible to recruit for two year assignments so a program was worked out by the Dean of Home Economics at Kansas State University and AID officials whereby four advisors, each from a different field of home economics, would serve for six months each. The four would coordinate their work as much as possible.

Another consultant arrived in February, 1965, for a one-month stay as Consultant to the Registrar. He was E.M. Gerritz, Registrar of Kansas State University. Mr. Gerritz advised on the records and reports to be used by the new University. He recommended that uniform records be kept at each College and that a copy be kept at the main campus at Rajendranagar. Other matters such as satisfactory filing and storage were discussed.

Participant Program Changes

A new participant program was developed by a committee from the United States universities working in India and chaired by Dr. Pickett. Under this program which began in 1965 the Indian Agricultural Research Institute would evaluate graduate course work done in the United States by participants and admit a quota each year for Ph.D. candidacy there. Research would be done on Indian problems in India.

Dr. Pickett retired after the completion of his third year in India on June 30, 1965.

Dr. Warren Prawl, who was completing his fourth year in India became Acting Chief of Party. As Extension education advisor, Dr. Prawl had provided leadership of a committee on evaluation during the formative period of Andhra Pradesh Agricultural University.

Agricultural Promotion Project

During the second year under Dr. Weber, an amendment to the Kansas State University USAID contract provided for a special team of specialists to work with the Intensive Agricultural Areas and High Yielding Varieties programs in Andhra Pradesh. Five specialists were recruited under the contract and posted at Hyderabad on the Agricultural Production Promotion Project. Each was assigned a counterpart from APAU and another from the Department of Agriculture. It was hoped that they might form a liaison between the Department and the University. The five specialists began work in the spring of 1967. The group's efforts were to be in adaptive research with the objective of greatly increasing agricultural production.

The specialists developed demonstration and training programs to acquaint agricultural workers at district, block and village levels and farmers with "Package of Practices" technologies to ensure their understanding and acceptance of the concepts and the ultimate implementation by the farmers. Steps were taken to establish close communication and working relationship between the field agriculture staff of the High Yielding Variety Areas program and other agencies responsible for providing the inputs. Field visits were made to identify problems, conduct operational studies and assess progress. These helped in collecting more pertinent data on which to base a time-phased course of action for each field problem unit. This is detailed below:

1. Soil Fertility Problem Unit: Promote efficient use of fertilizers in the production of high-yielding varieties by training extension workers and cultivators, concerning optimum time, rate and method of fertilizer application as related to climate and soil type.

2. Irrigation and Water Use Problem Unit: Prepare training material and conduct demonstrations on irrigation development, supply and distribution systems for effective water use on high-yielding varieties.

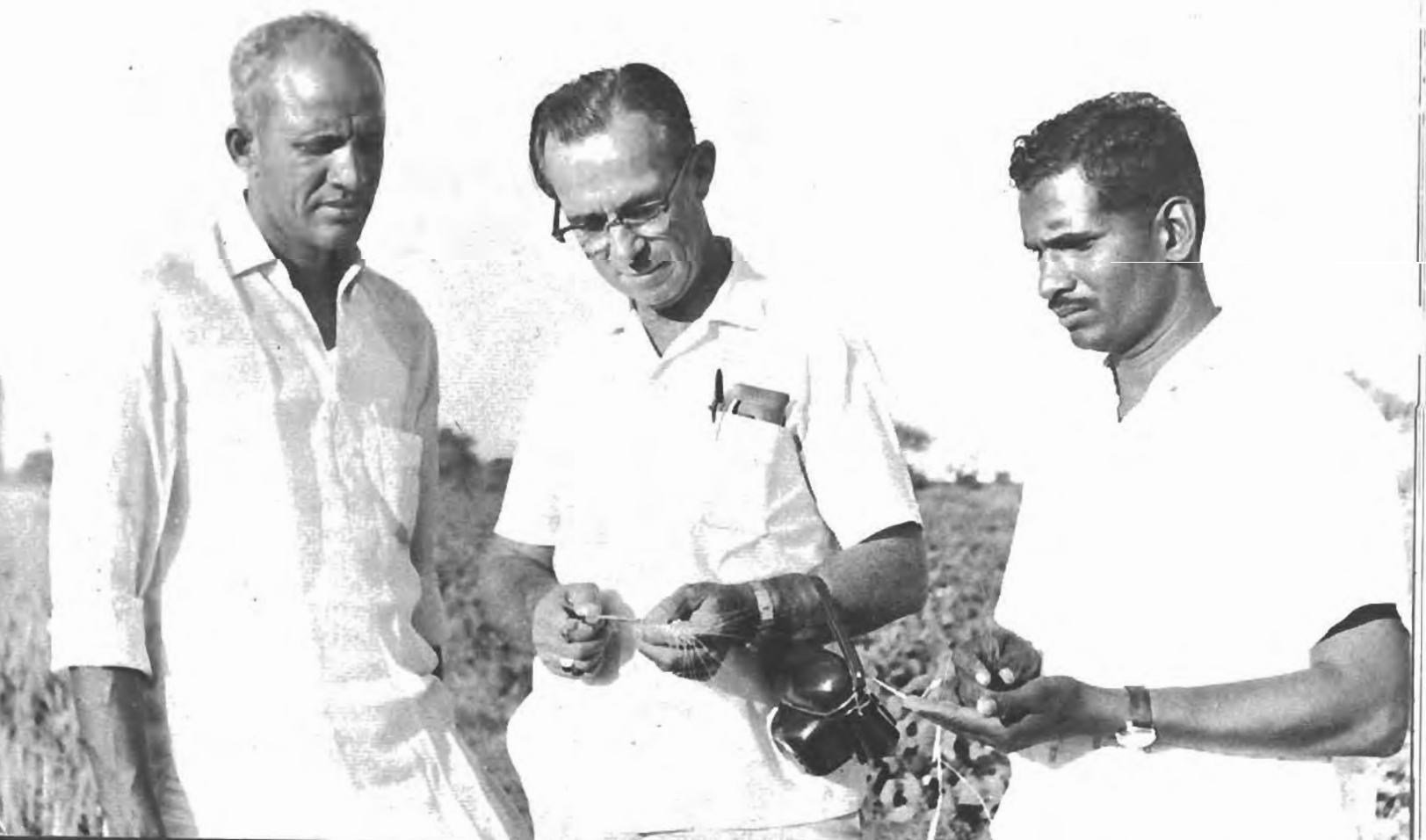
3. Agricultural Implements Problem Unit: Develop, field test and demonstrate the use of improved implements, both bullock and power drawn, in the production of high-yielding varieties and conduct training programs to promote the use of improved implements.

4. Plant Protection Problem Unit: Teach plant protection skills to block and village level



Seed Production Specialist, Carl Overley, consults with Indian colleagues on seeding experiments.

Agricultural Production Project member, Elbert Eshbaugh, works on insecticide application recommendations.



workers, conduct demonstrations and develop adaptive research studies on the control of stem borer and gallfly on paddy and shootfly on jowar.

5. Seed Production Problem Unit: Assemble and interpret for use in demonstrations and training programs valid information on the production, field inspection, harvesting, processing, storage and distribution of high yielding variety seeds.

The Agricultural Production Project was successfully completed late in 1971. Seven specialists had been associated with this effort.

Political Turmoil, 1968-1970

On June 19, 1968, Dr. Draytford Richardson arrived at Hyderabad to take over the assignment of Chief of Party after Dr. A. D. Weber's retirement on June 29, 1968. The team at this time consisted of seven specialists in the fields of irrigation, farm management, dairy technology, veterinary medicine, meat technology, agricultural engineering and agricultural communications. Three short-term consultants in grasslands and animal husbandry, artificial insemination and bacteriology also made contributions to the program during this period.

Political and social turmoil in the State of Andhra Pradesh during 1968-69 proved a disruptive force. Andhra Pradesh Agricultural University was closed for many months and specialists carried on their work under severe handicaps.

In spite of these problems, Dr. Richardson and his team members were able to begin several large rupee projects. These were funded from U.S. owned rupees in India, the result of wheat sales to India under Public Law 480, and were a major step in expanding Andhra Pradesh Agricultural University.

The Last Two Years, 1970-1972

In June of 1970 Dr. Vernon C. Larson, who had been Director of International Agricultural Programs at Kansas State University, took over from Dr. Richardson as the last Chief of Party. Although not completely obvious at the time, it was to become a race to complete the many projects and turn them over to Andhra Pradesh Agricultural University.

Final audit of sixteen years effort across the whole of South Central India was a time-consuming matter. Each of the technical projects begun by Kansas State University was completed as follows:

Grassland Project

This project was started in January 1968 and KSU-USAID assistance terminated on March 31, 1972. Equipment worth Rs. 89,275 was transferred to the Andhra Pradesh Agricultural University. This project should be continued by the University for some more years if full benefits are to be realized.

Ambulatory Clinic Project

The project started in July 1969 provided for two advisors for four man years. KSU-USAID assistance to the project was terminated on June 30, 1972. Equipment worth Rs. 118,219 was transferred to the college to continue the program.

Agricultural Communications Project

The project was completed on July 31, 1972. Equipment worth Rs. 70,000 has been transferred to the University. An amount of Rs. 20,000 was made available to provide sound proofing and acoustics of the recording studio. An Ampex single-track studio type tape recorder was made available to the centre as grant-in-aid by AID.

Dairy Processing Project

This project which provides for an up-to-date dairy processing plant for teaching, research and demonstration has been completed. A test run and training sessions were conducted. Dairy equipment worth Rs. 354,292 has been transferred to the College of Veterinary Science. KSU-USAID assistance to the project was terminated on July 31, 1972.

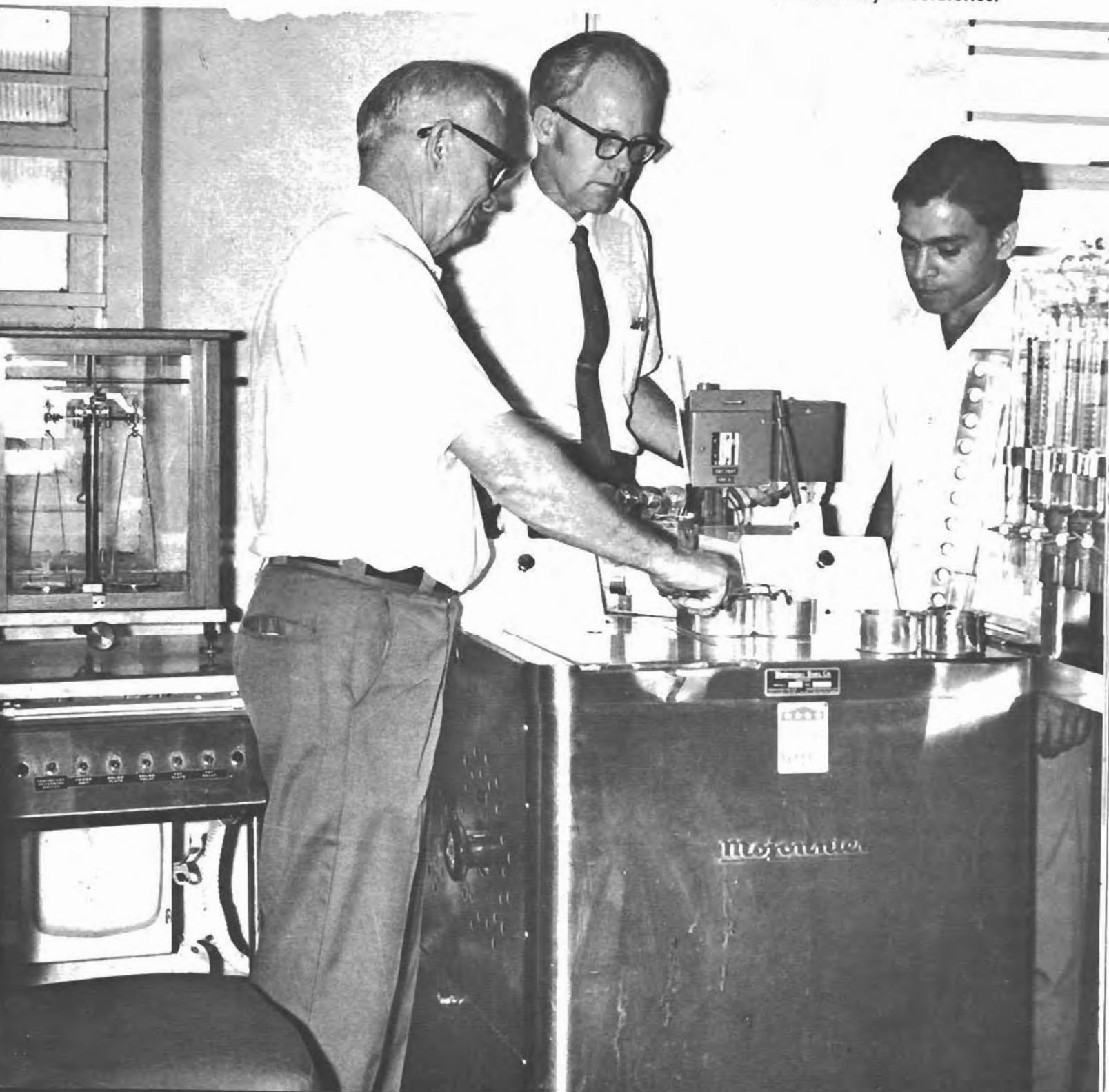
Land Shaping and Development

Phase II is a three year project. USAID support will continue under Rockefeller Foundation supervision. An amount of Rs. 1,150,000 has been approved for this project. After completion this will provide controlled and efficient delivery of irrigation water from Himayatsagar to the APAU research farm.

Water Resources Teaching & Demonstration Laboratory

This project has been completed as of June 30, 1972. Irrigation and scientific equipment worth Rs. 190,527 was transferred to the S.V. Agricultural College, Tirupati. This project is designed to serve as a demonstration unit and as a training ground on modern techniques of efficient water use for students, extension staff, farmers and other interested groups.

Dairy Specialist, Paul Johnson, and
Chief of Party, Vernon Larson, view
operation of a Mojonnier Tester
in University Laboratories.





Hand threshing of IR 8 rice crop at
Azamgulashan Farms.

Conclusions

Value of the Program to India

It is difficult to evaluate an effort of sixteen years in a land where recorded history goes back more than 3000 years. We Americans by nature are impatient for immediate results. India has made tremendous progress in the twenty-five years since its independence. The last ten years have seen amazing increase in agricultural production. In spite of the terrible drouths of 1965, 1966, and 1967, India has become self-sufficient in food grain production. With the grim picture of an ever-increasing population demanding more and more food, Indian planners have been able to motivate farmers to produce in a manner thought impossible only a few years ago.

What did Kansas State University accomplish with more than one hundred man years of effort in India?

Many of the everyday procedures used by Andhra Pradesh Agricultural University in administration, teaching, research and extension were unheard of in India only a few years ago. Today they are an intergral part of

the scene introduced along the way by Kansas State team members.

Much time was devoted to research on problems relating to animal science, agronomy, soil fertility, irrigation and water management, plant protection and dairy science. The changes in these fields testify to the merits of these efforts.

Practical demonstrations and teaching projects were conducted in a wide range of subjects from poultry production to agricultural communications from home science to veterinary science.

Extension work with farmers in their villages introduced many of them to the concept of farming as a commercial business rather than a way of life.

The books and equipment supplied to institutions in India made it possible for many students to have firsthand experience with the current state of agricultural technology.

How can a spark ignited in some future Indian scientist be evaluated. A better life for a villager and his family is hard to add in an equation. Time will give the only true answer. If India continues to move ahead as a democratic nation against the mighty odds she faces, we can then conclude our work has been well done.



Value of the Program to Kansas State University

Kansas State University has gained much from the sixteen years of activity with the United States Agency for International Development in India.

In 1956, when the first team left for the sub-continent, the administration looked forward to a three-year commitment to help agricultural education go forward in India. Few could have imagined the extent of this task, let alone the time and number of personnel who were to be involved.

Faculty and staff members who lived and worked in India came home with a much broader point of view and a deeper appreciation for the vast problems faced by much of the world's people. A compassion and understanding developed that no amount of "second hand" information could generate. These experiences influenced their teaching, research and extension activities at Kansas State. Their students and associates gained perspective from them. No longer was the

university's world defined by state or national boundaries but encompassed the world.

Administrators who directed and visited the project were stimulated by the contributions Kansas State was making in a distant land.

The participating students who came to Manhattan made a major contribution of their own. The one hundred and sixty Indian students who studied at our University under this project came eager for knowledge but each by his or her presence influenced their instructors and fellow students. From a different and much older culture, product of a different type of educational system, they left something of themselves and their country in Kansas.

As these students returned to India with new ideas and enthusiasms, they are making real and meaningful changes in a social system that has always been resistant to outside influences. Most of the present deans and department heads at Andhra Pradesh Agricultural University received their doctorates at Kansas State University. They continue to strengthen and improve the quality of life in their nation. Kansas State University and Andhra Pradesh University, half way around the world from each other, will continue to be linked together for the betterment of mankind.



Home Economist, Kathryn Shugrue, plans new courses with colleagues.

APAU students study land leveling.



APPENDIX I

The following alphabetical listing includes all members of the Kansas State University team who served in India. It encompasses both Agricultural University Development and the Agricultural Production projects.

Kansas State University Team Members

July 1, 1956 to August 31, 1972

- Albertson, Dr. F. W.**, Agronomist and Grassland Spec., Sept. 1956 to June 1958, Soil Conservation Service, Rajkot.
- Amstein, Mr. W. G.**, Horticulture Spec., Jan. 1963 to Nov. 1964, College of Agr., Rajendranagar, Hyderabad. Extension Spec. and Deputy Chief of Party, Apr. 1966 to May 1968, Andhra Pradesh Agricultural University, Hyderabad.
- Axthelm, Mr. Larry S.**, Irrigation Spec., Aug. 1969 to July 1971, State Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Baird, Miss Mae**, Home Science Spec., Feb. 1959 to May 1960, Institute of Agr., Anand. May 1960 to Dec. 1960, College of Agr., Osmania University, Hyderabad. July 1964 to Feb. 1965, College of Home Science, Andhra Pradesh Agricultural University, Hyderabad.
- Busset, Dr. Glenn M.**, Extension Training Spec., June 1956 to April 1958, College of Agr., Osmania University, Hyderabad.
- Chilson, Dr. William H.**, Dairy Spec., July 1956 to May 1958, Institute of Agr., Anand.
- Cox, Dr. Rufus F.**, Consultant in Sheep Breeding and Grassland, Nov. 1968 to Dec. 1968, Andhra Pradesh Agricultural University, Hyderabad.
- Deyoe, Dr. Charles W.**, Feed Technology Consultant, Nov. 1971 to Dec. 1971, Andhra Pradesh Agricultural University, Hyderabad.
- Dicken, Mr. D. Dean**, Soil Fertility Spec., June 1969 to May 1971, State Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Dixon, Mr. John E.**, Agricultural Engineering Spec., Nov. 1967 to Aug. 1969, Andhra Pradesh Agricultural University, Hyderabad.
- Dodge, Mr. Gilbert R.**, Consultant to Comptroller, Oct. 1964 to Dec. 1964, Andhra Pradesh Agricultural University, Hyderabad.
- Donahue, Dr. Roy L.**, Agronomist, Nov. 1956 to Feb. 1961, College of Agriculture, Bapatla.
- Dubois, Mr. Robert H.**, Irrigation Spec., Feb. 1967 to May 1969, State Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Ellis, Dr. Roscoe, Jr.**, Consultant in Soil, Micronutrients, June 1970 to July 1970, Andhra Pradesh Agricultural University, Hyderabad.
- Eshbaugh, Mr. Elbert L.**, Plant Protection, March 1967 to April 1969, and June 1969 to June 1971, State Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Filinger, Dr. George A.**, Group Leader and Horticultural Spec., June 1956 to April 1958, Dept. of Agr., Hyderabad.
- Fowler, Dr. George R.**, Veterinary Spec., April 1957 to May 1957, (Left to India due to serious illness.)
- Gerritz, Dr. E. M.**, Consultant to Registrar, Feb. 1965 to March 1965, Andhra Pradesh Agricultural University, Hyderabad.
- Hamon, Mr. John M.**, Seed Production Spec., Oct. 1969 to Sept. 1971, Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Harris, Dr. John O.**, Consultant in Bacteriology, July 1968 to Aug. 1968, Andhra Pradesh Agricultural University, Hyderabad.
- Herpich, Mr. Russell L.**, Irrigation Consultant, March 1968 to April 1968, Andhra Pradesh Agricultural University, Hyderabad.
- Hill, Dr. Randall C.**, Rural Sociologist, July 1956 to May 1958, College of Agriculture, Poona.
- Hodges, Dr. Julian A.**, Farm Management Spec., Feb. 1963 to June 1965, College of Agriculture, Poona.
- Hoffman, Mr. Theodore E.**, Agriculture Info. Spec., Nov. 1967 to Nov. 1969, Andhra Pradesh Agricultural University, Hyderabad.
- Hoskins, Dr. Edwin R.**, Extension Spec., July 1956 to Jan. 1958, College of Agriculture, Poona.
- Jackobs, Dr. J. A.**, Agronomy Spec., Oct. 1958 to Aug. 1960, College of Agriculture, Poona.
- Johnson, Mr. Paul E.**, Dairy Technologist, Jan. 1968 to Oct. 1971, Andhra Pradesh Agricultural University, Hyderabad.
- Johnson, Miss Sharleen L.**, Graduate Research Asst., June 1967 to May 1968, College of Home Science, Andhra Pradesh Agricultural University, Hyderabad and Nutrition Research Lab., Hyderabad.
- Knorr, Dr. L. C.**, Consultant in Citrus Virology, Sept. 1970 to Oct. 1970, Andhra Pradesh Agricultural University, Hyderabad.
- Larson, Dr. Vernon C.**, Agricultural Education Specialist and Chief of Party, June 1970 to August 1972, Andhra Pradesh Agricultural University, Hyderabad.
- Lawrence, Mr. Layle D.**, Farm Mechanization Spec., Feb. 1967 to March 1969, May 1969 to July 1971, Dept. of Agr. and Andhra Pradesh Agr. Univ., Hyderabad.
- Leasure, Dr. E. E.**, Consultant in Veterinary Medicine, June 1967 to July 1967, Andhra Pradesh Agricultural University, Hyderabad.
- Mader, Dr. Ernest L.**, Soil Conservation Specialist, Feb. 1970 to Feb. 1972, Andhra Pradesh Agricultural University, Tirupati.
- Medlin, Mr. Roger C.**, Agricultural Communication Specialist, Oct. 1970 to Aug. 1972, Andhra Pradesh Agricultural University, Hyderabad.
- Miller, Mr. H. James**, Campus Development Spec., Aug. 1964 to Jan. 1965, Feb. 1966 to April 1968, Aug. 1968 to June 1971, Andhra Pradesh Agricultural University, Hyderabad, ICAR, New Delhi.
- Miller, Dr. William R.**, Animal Virology Consultant, Oct. 1971 to Dec. 1971, Andhra Pradesh Agricultural University, Hyderabad.
- Montgomery, Dr. George**, Agricultural Economist and Chief of Party, July 1958 to April 1960, College of Agriculture, Osmania University, Hyderabad. July 1960 to July 1962, College of Agr., Poona.
- Moore, Dr. Earl N.**, Poultry Scientist, July 1956 to Feb. 1961, Veterinary College, Nagpur. May 1961 to Nov. 1962, Veterinary College, Osmania University, Hyderabad. Dec. 1965 to Nov. 1967, Veterinary College, Andhra Pradesh Agr. Univ., Hyderabad.
- Norman, Dr. Charles**, Consultant in Artificial Insemination, Oct. 1968 to Dec. 1968, May 1970 to Aug. 1970, Andhra Pradesh Agricultural Univ., Hyderabad.

- Overly, Mr. Carl B.**, Seed Production Spec., April 1967 to April 1969, State Dept. of Agr., and Andhra Pradesh Agricultural University, Hyderabad.
- Pady, Dr. Stuart M.**, Consultant in Aerobiology, Dec. 1969 to March 1970, Andhra Pradesh Agr. University, Hyderabad.
- Peterson, Mr. Verlin H.**, Soil Fertility Spec., March 1967 to March 1969, State Dept. of Agr. and Andhra Pradesh Agricultural University, Hyderabad.
- Pickett, Dr. William F.**, Chief of Party and Agr. Ed. Spec., Sept. 1962 to June 1964, Dept. of Agr., Hyderabad.
- Prawl, Dr. Warren L.**, Ext. Education Spec., Feb. 1962 to March 1964, College of Agr., Andhra Pradesh Agr. Univ., Hyderabad. June 1964 to May 1966, College of Agr. Andhra Pradesh Agricultural Univ. Hyderabad.
- Raney, Mr. Robert J.**, Irrigation Specialist, Jan. 1969 to Feb. 1972, Andhra Pradesh Agricultural University, Hyderabad.
- Richardson, Dr. Draylford**, Agr. Education Spec. and Chief of Party, June 1968 to July 1970, Andhra Pradesh Agr. Univ., Hyderabad.
- Schafer, Mr. David E.**, Meat Technology Spec., Jan. 1968 to Nov. 1969, Andhra Pradesh Agr. Univ., Tirupati.
- Sill, Dr. Webster H. Jr.**, Agr. Research Spec., April 1966 to Jan. 1968, Andhra Pradesh Agr. Univ., Hyderabad.
- Stith, Dr. Marjorie M.**, Consultant in Family and Child Development, June 1966 to Dec. 1966, College of Home Science, Andhra Pradesh Agr. Univ., Hyderabad.
- Sughrue, Mrs. Kathryn E.**, Home Science Consultant, Jan. 1968 to June 1968, College of Home Science, Andhra Pradesh Agricultural University, Hyderabad.
- Swope, Dr. Robert E.**, Veterinary Pathologist, June 1958 to March 1960, Veterinary College, Mhow, M. P.
- Terpening, Mr. Gilbert K.**, Farm Management Spec., July 1968 to Aug. 1969, Andhra Pradesh Agr. University, Hyderabad.
- Tinklin, Miss G. L.**, Consultant in Food and Nutrition, Dec. 1966 to June 1967, College of Home Science, Andhra Pradesh Agr. Univ., Hyderabad.
- Walker, Dr. Donald F.**, Veterinary Clinician, Aug. 1968 to June 1970, Andhra Pradesh Agr. Univ., Tirupati.
- Warden, Dr. Jessie A.**, Home Science Consultant, June 1967 to Dec. 1967, College of Home Science, Andhra Pradesh Agr. Univ., Hyderabad.
- Weber, Dr. Arthur D.**, Agr. Education Spec. and Chief of Party, Oct. 1965 to June 1968, Andhra Pradesh Agr. Univ., Hyderabad.
- Weyerts, Mr. Alfred C.**, Instrumentation Spec., July 1969 to Sept. 1969, Aug. 1970 to Oct. 1970, Andhra Pradesh Agr. Univ., Hyderabad.
- Wilson, Dr. I. D.**, Post Graduate Spec. and Deputy Group Leader, May 1958 to April 1960, Indian Veterinary Research Institute, Izatnagar, U. P.
- Winkler, Dr. John K.**, Veterinary Specialist, June 1970 to May 1972, Andhra Pradesh Agricultural University, Tirupati and Hyderabad.

APPENDIX II

PARTICIPANTS 1956-1972

Name	Major Field	
Adeni, M. K.	Agron. & Ag. Ed.	Nath, Duddala Mahendra Vet. Med.
Admedulla, Moh.	Horticulture	Nomani, M. Z. A. Animal Nutrition
Ahmed, N. A.	Entomology	Oke, J. G. Agronomy
Ahmed, M. K.	Ag. Statist. cs	Padoley, G. C. Agr. Chemistry
Amin, R. S.	Horticulture	Pandya, H. G. Agr. Chemistry
Appalanaidu, B.	Botany	Pargaonkar, V. N. Agr. Chemistry
Apparao, A.	Plant Path.	Parnalk, D. T. Admin. Study
Bhalakar, D. V.	Ag. Chemistry	Parthasarthy, I. V. Agr. Economics
Bhanumurthy, S.	Ag. Chemistry	Patel, A. J. Botany & Plant Pathology
Bharker, D. G.	Plant Physiology	Patel, H. N. Ext. Education
Bhaskaram, K.	Ext. Education	Patel, T. D. Dairy Tech.
Bhave, A. M. (Mrs.)	Home Economics	Patil, B. B. Agronomy
Bhave, N. D.	Poultry Husbandry	Patil, J. G. Agr. Extension
Birewar, B. R.	Ag. Engg.	Prasad, D. A. Animal Nutrition
Das, C. T.	Animal Nutrition	Purohit, B. L. Pathology
Das, T. Lohi	Chemistry	Pushpomma, S. (Mrs.) Plant Biochem.
Dave, A. D.	Physiology (cattle)	Raghavan, R. S. Vet. Surg. & Med.
Deb, R. N.	Animal Husbandry	Rahate, V. T. Agronomy
Desai, M. K.	Plant Physiology	Rahudkar, W. B. Rural Sociology
Desai, R. T.	Dairy Science	Raika, R. K. Animal Nutrition
Dhake, P. R.	Bacteriology	Raj, Yasoda (Mrs.) Cyto, Genetics
Dharmaraju, Edwin	Entomology	Raj, A. Shiv Plant Physiology
Diskalhar, P. D.	Dairy Science	Raju, D. Gopala Plant Pathology
Dixit, S. G.	Virology	Rajulu, P. S. Bacteriology
Dorge, S. K.	Entomology	Rajulu, Varada P. Poultry Science
Gaffar, A. A.	Vet. Med.	Ramakrishna, K. Vet. Helminthology
Gharat, G. K.	Ag. Engg.	Ramasubbalah, Kase Entomology
Gokhale, D. R.	Genetics & A.H.	Ramkishen, A. S. Livestock Prod.
Gokhale, V. V.	Ag. Engg.	Rao, A. H. Dairy Science
Gupta, P. K.	Horticulture	Rao, B. Ramonohan Meat Tech.
Havaldar, M. K.	Anatomy	Rao, B. V. R. Cyt. & Plant Breeding
Husain, Mir Mustafa	Agronomy	Rao, C. V. Dairy Husbandry
Jatkar, V. D.	Pathology	Rao, D. M. V. Prasada Agr. Chem. & Soil Science
Jayaramakrishna, V.	Animal Breed.	Rao, D. Narayana Biochemistry
Joglekar, N. M.	Ag. Econ.	Rao, D. V. Subba Ext. Vet.
Joshi, H. A.	Botany and Plant Pathology	Rao, G. Mudhusudana Agronomy (Radiation Genetics)
Joshi, V. H.	Extension Edu.	Rao, H.S. Nagaraia Microbiology
Kakde, J. R.	Agronomy	Rao, K. Ramamohana Agr. Entomology
Kathe, S. T.	An. Nutrition & Biochemistry	Rao, K. Satyanarayana Animal Physiology
Khan, M. Q.	Admin. Study	Rao, M. Krishan Vet. Med.
Krupadanam, P. A. V. (Miss)	Home Economics & Nutrition	Rao, M. R. Mohan Agronomy
Kshirsagar, S. G.	Animal Husbandry	Rao, M. Rama Animal Nutrition
Mohandar, M.	Vet. Pathology	Rao, M. V. Chalapati Animal Husbandry
Mather, C. R.	Poultry Science	Rao, N. R. Entomology
Mehta, B. V.	Soil Science	Rao, O. S. Poultry Science
Mithuji, G. F.	Poultry Science	Rao, P. G. Botany
Mohiddin, Shaik	Plant Pathology	Rao, P. Narashimha Animal Nutrition
Mudholkar, D. R.	Anatomy	Rao, P. L. N. Vet. Surgery & Medicine
Mudaliar, A. S. R.	Livestock Prod.	Rao, P.S. Prakash Dairy Science
Muralidharam, S. R. G.	Vet. Parsit.	Rao, P. V. Narayan Agr. Engg.
Murkibhavi, G. R.	Vet. Medicine	Rao, Rama Madhavarapu Animal Nutrition
Murthy, A. S.	Extension Edu.	Rao, R. S. Agronomy
Murthy, G. N.	Vet. Medicine	Rao, V. Dhananjaya Agr. Information
Murthy, V. Sreerama	Agronomy	Rao, V. Pandurang Anatomy
Nagabhushanam, T. D. J.	Economics	Rao, Y. Yogeshwara Agronomy
Narasimhalu, P. R.	Animal Nutrition	Razvi, H. A. Admin. Study
Nagamia, M. H.	Surgery & Med.	

Reddi, G. Ramama Agr. Engg.
 Reddi, M. Ranga Agronomy
 Reddi, N. S. Agronomy
 Reddy, A. Adivi Agr. Ext.
 Reddy, A. G. R. Soil Microbiology
 Reddy, A. S. Entomology
 Reddy, C. Raja Plant Genetics
 Reddy, B. Dhananjaya Pathology
 Reddy, D. Bhim Reprod. Physiology
 Reddy, G. P. V. Entomology
 Reddy, G. H. S. Citrus Virology
 Reddy, G. Venkateswara Agronomy
 Reddy, M. Raj Grain Science
 Reddy, M. Sugunakar Plant Pathology
 Reddy, M. Shive Shanth Agronomy
 Reddy, M. Venkatarama Pl. Breeding
 & Genetics
 Reddy, Nagety Yella Audio Visual
 Reddy, P. R. Botany
 Reddy, Venkata K. Anatomy
 Reddy, V. Rayapa Surgery & Med.
 Sadekar, V. D. Physiology
 Sahasrabudhe, K. R. Dairy Science

Sambamurti, B. Virology & Immunology
 Sangle, E. M. Dairy Science
 Sarma, P. L. Narayana Animal Breeding
 Sastry, V. V. K. Agronomy
 Satyanarayana, Vulchi Agronomy
 Savale, R. S. Agr. Economics
 Savant, N. K. Soil Science
 Shirpurkar, G. R. Ext. Methods & Adm.
 Shrivastava, R. C. Admin. Study
 Siddiqui, Mohd. M. Ext. Edu.
 Siddiqui, S. M. Poultry Science
 Subbarayudu, D. Poultry Husbandry
 Subbaya, J. Plant Pathology
 Suryanarayana, K. S. Agr. Economics
 Tanksale, V. S. Agr. Engg.
 Thakare, K. R. Agr. Entomology
 Thombre, M. V. Cytogenetics
 Vanjari, S. S. Agron. Engg.
 Venkataratnam, G. Dairy Science
 Venkayya, D. Dairy Tech.
 Vyas, S. H. Dairy Engg.
 Walliullah, Mohammed Extension
 Yaseen, Mohamed Agronomy

President, James H. McCain, and
 India's Ambassador to the United
 States, B. R. Nehru, look at India
 Day displays on the Kansas
 State Campus.



APPENDIX III

One provision of the KSU contract with the United States Agency for International Development called for a twice-yearly visit to India by administrative heads of the University. They were to review the work being done by the staff, hold conferences with officials of USAID, the Government of India and cooperating institutions on the future development of the programs. Following is a report on those who fulfilled this requirement:

1. Dr. C. Peairs Wilson Director of Experiment Station	July 1957	20. Dr. James A. McCain President	January 1967
2. Dr. Arthur D. Weber Dean of Agriculture	Dec. 1957-January 1958	21. Mr. Lawrence Morgan Member Board of Regents	January 1967
3. Dr. Wm. F. Pickett Campus Coordinator	January-February 1959	22. Dr. Robert A. Bohannon Director, International Agricultural Programs	March 1967
4. Dr. E. E. Leasure Dean, School of Vet. Medicine	January-February 1959	23. Dr. Doretta S. Hoffman Dean of Home Economics	October-November 1967
5. Dr. Arthur D. Weber Dean of Agr. and Member, Ford Foundation Team on Agricultural Productivity	January-March 1959	24. Dr. Glenn H. Beck Vice President for Agriculture	January 1968
6. Dr. James A. McCain President	January-February 1960	25. Dr. Emil C. Fischer Dean, College of Architecture and Design	February 1968
7. Mr. Whitley Austin Board of Regents	January-February 1960	26. Dr. Robert A. Bohannon Director, International Agricultural Programs	March-April 1968
8. Dr. Wm. F. Pickett Campus Coordinator	January-February 1961	27. Dr. George Montgomery Department of Economics (Long range agricultural analysis)	January 1969
9. Dr. Glenn H. Beck, Dean of Agriculture	January 1962	28. Dr. Vernon C. Larson Director, International Agricultural Programs	March 1969
10. Dr. Wm. F. Pickett Director, Foreign Agriculture Program	January 1962	29. Dr. Carroll V. Hess Dean, College of Agriculture	November 1969
11. Dr. Vernon C. Larson Director, International Agricultural Programs	January-February 1963	30. Dr. Robert F. Kruh Dean, Graduate School	November 1969
12. Dr. A. D. Weber Vice President for Agriculture	January-February 1963	31. Dr. Paul L. Kelley Head, Dept. of Economics	November 1969
13. Dr. Glenn H. Beck Dean of Agriculture	February 1964	32. Dr. Vernon C. Larson Director, International Agricultural Programs	March-April 1970
14. Dr. George A. Fillingier Home Staff Member	February-March 1964	33. Dr. Charles Cornelli Dean, College of Veterinary Medicine	August-September 1970
15. Dr. Doretta S. Hoffman Dean of Home Economics	January-February 1965	34. Dr. Floyd W. Smith Acting Vice President for Agriculture	February 1971
16. Dr. Arthur D. Weber Vice President Emeritus and Director of International Activities	January-February 1965	35. Dr. John Chalmers Vice President for Academic Affairs	February 1971
17. Dr. Arthur D. Weber Vice President Emeritus and Director of International Activities	June 1965	36. Dr. Raymond V. Olson Director, International Agricultural Programs	March 1972
18. Dr. John Lott Brown Vice President for Academic Affairs	February 1966	37. Dr. Carroll V. Hess Dean of Agriculture	March 1972
19. Dr. Robert A. Bohannon Director, International Agricultural Programs	February 1966		

APPENDIX IV

Funds Expended 1956-1972

Books and Equipment: The following table gives details for values of books and equipment that were provided to the cooperating colleges:

Colleges	Books Dollars	Equipment Dollars
1. College of Agriculture Hyderabad	8,797	71,033
2. College of Veterinary Science Hyderabad	5,554	50,419
3. College of Home Science Hyderabad	1,846	5,830
4. College of Agriculture Bapatle	4,638	26,313
5. College of Agriculture Tirupati	2,216	9,301
6. College of Veterinary Science Tirupati	5,340	25,342
7. Institute of Agriculture Anand	10,614	96,668
8. Indian Veterinary Research Institute, Izatnagar	3,235	146,400
9. Bombay Veterinary College Bombay	5,471	40,025
10. College of Agriculture Poona	1,289	26,603
11. College of Agriculture Nagpur	1,305	9,990
12. College of Veterinary Science Nagpur	1,026	2,951
13. College of Agriculture Akola	2,291	10,232
Total	53,622	521,107

ANNUAL RUPEE EXPENDITURES BY YEARS

	Rupees
August-Dec. 1956	32,418
1957	105,978
1958	103,775
1959	108,402
1960	103,397
1961	244,343
1962	216,567
1963	345,971
1964	428,833
1965	314,337
1966	662,011
1967	657,822
1968	1,295,962
1969	1,107,607
1970	1,658,920
1971	1,321,214
Jan.-August 1972	1,231,512
Total	Rs. 9,939,069*

* One U.S. dollar equals approximately Rs. 7.6

3-73-1.84A



International Agriculture Programs



Kansas State University - Manhattan, Kansas

