

A ROLE IN WORLD AFFAIRS AT M. U.

COLLEGE OF AGRICULTURE
UNIVERSITY OF MISSOURI
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■ More than 70 Universities in the United States are now furnishing technical assistance to foreign countries under some 130 contracts with the U. S. Agency for International Development (AID). These contracts involve more than \$150 million a year, sending University personnel all over the world and bringing foreign educators to the U. S. for training.

The University of Missouri is in the thick of this challenging movement. In its biggest foreign undertaking, it has provided the graduate degree education of 384 India participants and sent 14 American faculty members to India to help organize agricultural education programs.

In 1957 the University of Missouri College of Agriculture made one of the first contracts with AID (then ICA) and the government of India to help organize research, teaching, and extension services in agricultural colleges of four Indian states, Assam, West Bengal, Bihar, and Orissa. Numerous scientists had gone to Asia, Africa, and South America on individual assignments prior to this (and still do) but this was Missouri's first long time contract.

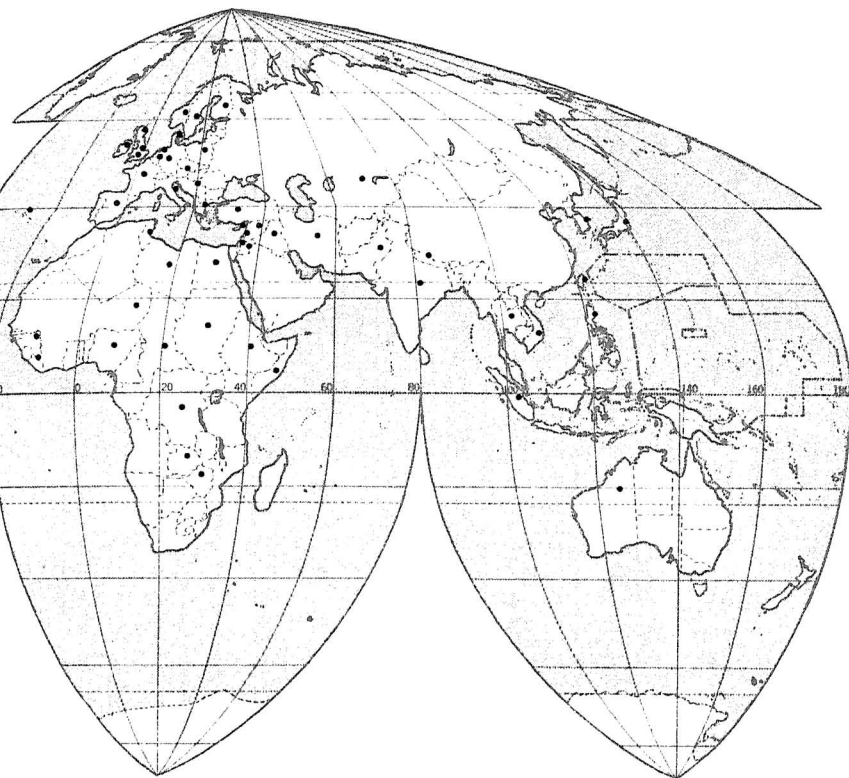
Recently, the University's newly organized Department of Community Development and the Language Department have been under contract to train Peace

Corps workers for Peru, Ecuador, India, Nepal, Thailand, and Colombia. Other departments have become involved.

Some tradition minded academicians view the broadening scope of universities with trepidation. To them, John W. Gardner, president of the Carnegie Corporation, has this to say in his 1964 report of a study on *AID and the Universities*: "In order to educate their students for the world of today and tomorrow and to carry out their tasks of advancing human understanding, universities must relate themselves to the rest of the world. Science and scholarship have never confined themselves to national boundaries."

Another study, by the University and World Affairs Committee, organized by the Ford Foundation, makes this point: "A significant proportion of professional graduates can expect to find part of their careers in foreign areas, whether their profession be law, education, public administration, business, medicine, public health, engineering or agriculture. If only on this utilitarian ground, the case is clear for an effective international component in the programs of the stronger professional schools."

Our purpose in offering aid is partially altruistic... but certainly not entirely. Our desire to see other nations



A ROLE IN WORLD AFFAIRSAT M.U.

Paul Gwin and F. E. Rogers

achieve high standards of living under self determined government is partly due to our concern for human welfare and partly due to the threat police states pose to our own freedom.

Then there is our interest in peace. As long as masses of people exist in poverty they will be a threat to peace. Men cannot be expected to think of high aspirations—freedom, justice, equality, and Truth with a capital T—when their children are starving. And they are vulnerable to the promises of silver-tongued dictators of the left and right. Philosopher Lin Yutang in his book, *The Secret Name*, describes the “transition period” of communism as “a process of Socialist change by which a very sad present guarantees a very happy future.” This humorous description fits the promises of most “isms.”

Education and research are well recognized as the keys to advancement of developing regions. In the midst of turmoil in Congress over approval of each foreign aid budget the technical assistance portion is one that meets approval of all. Advanced societies can aid developing ones but in the end it is the local people who must prepare themselves technically and spiritually for building nations.

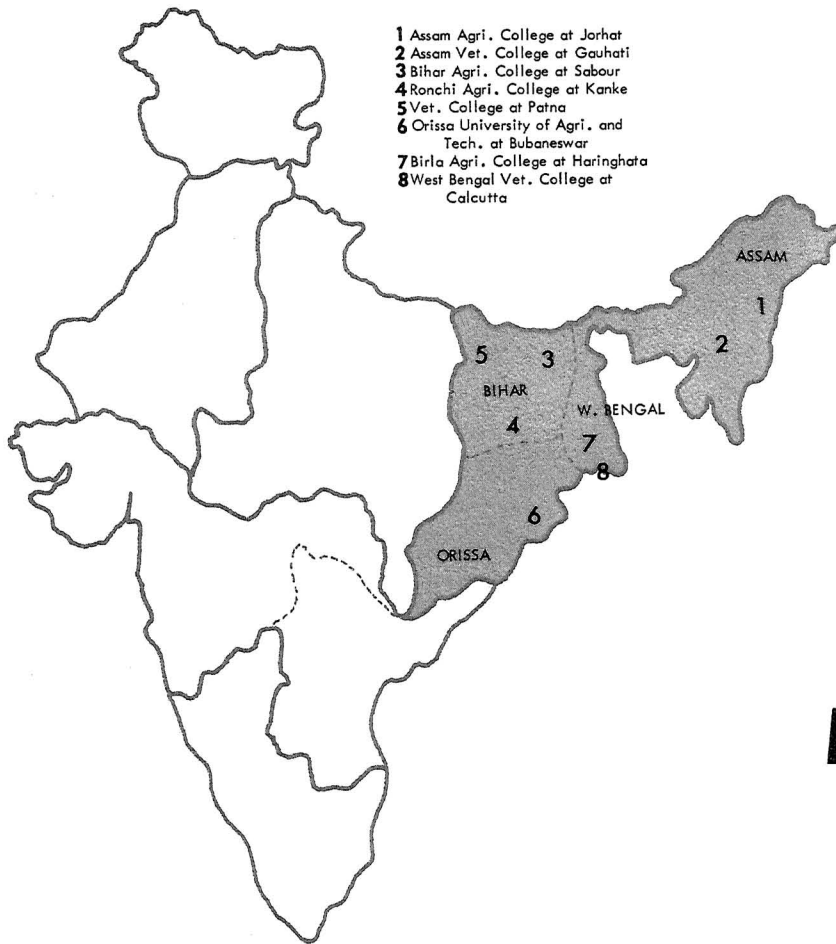
Not many of the developing regions are poor be-

cause they lack natural resources. India, for example, has a huge agricultural production potential.

India can double or triple production on much of its land merely by growing an extra crop in the dry season with stored water from the monsoon season or shallow well irrigation. Where most of North America has less than half a year of growing season most of India can grow crops 12 months a year. Huge areas of rich alluvial soil are part of India's natural resources. It has been farmed for centuries but only with pointed sticks drawn haphazardly around fields, stirring the top two or three inches. Plowing with modern plows brings up virgin soil. (India also has huge deposits of iron ore and other virtually untapped minerals.)

What the developing countries lack is the technologically educated people and those with management know-how to develop their resources. A primary purpose of the university-AID contract programs is to help countries develop educational facilities to train such leadership.

The following report covers the biggest of the foreign student training programs—The India Contract program—mainly from the Missouri end. An earlier publication, Bulletin 752, *The University of Missouri Goes to India*, describes the technical team's work in India.



M.U. HELPING LAY THE EDUCATIONAL FOUNDATION

■ Soon after gaining independence in 1947 and becoming a republic in 1950, India launched a planned development program. Education was recognized as basic to the development.

The government of India started major development efforts in 1955 with a series of five-year plans. For help with food production they contracted with five U. S. land grant colleges to teach them how Americans had combined their system of research and extension teaching services to enable U. S. farmers to forge far ahead of all others in a period of about 30 years. The five contracting institutions were the Land Grant Universities of Missouri, Illinois, Kansas, Tennessee, and Ohio.

While both industrial and agricultural development are stressed in the five-year plans, agriculture has an especially critical role in that more than 70 percent of the Indians earn their living from farming. More than 80 percent of the 460 million people live in rural villages, mostly under very poor conditions.

An obvious reason for advancing the nation's agriculture is to increase food supplies. A less obvious one is to increase the efficiency of farms so fewer people are needed in agriculture and more can turn their attention to building industry. Where the U. S. farmer feeds himself and 31 others, the Indian farmer generally produces little more than enough food for his own family.

If the information that is available from University conducted research and from the examples set by better farmers is put into practice by the masses of farmers, India's food shortage can be overcome. This is the huge challenge of India's agricultural research and extension services.

As a result of first phases of the contract program, two agricultural colleges and experiment stations for research and teaching of agricultural subjects are fairly well established. Two new universities have been formed — Orissa University of Agriculture and Technology at

PRAISE FROM THE PEACE CORPS

One high compliment to the University of Missouri India program came from an unexpected source . . . a Peace Corps worker. From her post near Calcutta, Mrs. Jean Plunkett wrote to Dr. Funk, chairman of the University of Missouri Poultry Department: " . . . Regardless of our efforts, they cannot begin to compare with the good will and enthusiasm of an Indian who has been to America and is now sharing this enthusiasm here."

She went on to explain, "Mr. Sanri Mitra, the manager of our local poultry farm just returned from America where he studied under you and others. Everywhere he was treated royally. He learned much . . . true, he saw the wealth of our country, our modern conveniences, and our highly developed poultry business. This impressed him.

But he was more impressed with Americans and talks about the wonderful people he met there and how they went out of their way to help him.

" . . . Most important, Mr. Mitra came back with many ideas of a practical nature to help the underdeveloped poultry industry in our part of India . . . He will be an important man soon . . . he is to go to the main State Poultry Farm where his ideas and energies are badly needed. Needless to say, our work as Peace Corps volunteers will be made easier because we will be able to help each other and he will back us up in our 'daring' undertakings."

While in Missouri, Mr. Mitra spent some time in counties and took poultry courses at the University.

Bhubaneswar and Kalyani University at Kalyani—patterned closely to land grant universities in the U.S.

Laboratories for research and teaching in extension education have been provided in the Extension Blocks attached to the Assam Agricultural College at Jorhat and the Bihar Agricultural College at Sabour as well as the two new universities.

More emphasis is now planned for "extending" the research information out to farmers through a college-based Extension Service. Cliff Meeker, a former Farm Management Specialist on the University of Missouri staff, is the American technical advisor on Extension programming. Mr. Meeker is optimistic about Extension's future in India. He has two top notch Indians working with him who received graduate degrees at the University of Missouri. They are producing some dramatic results. He points out that when a modern scientific prac-

tice is tried in a demonstration on an Indian farm the result usually is spectacular. This makes extension work in India highly rewarding to the educator who sees the fruits of his effort unfold before his eyes.

Of course, all will not be rosy. The experiment stations must adapt scientific methods and varieties of crops best suited to India's climate and soils. Research takes time, as does the process of educating a generation of men to man the experiment stations and teaching programs. Population expansion and lingering traditions also impede progress in expanding per capita food supplies. But the foundation has been laid, the qualified men are appearing, and the Indians are eager to progress.

To staff the colleges, the research stations, and their extension services with highly trained personnel, many Indians are being sent to Missouri for advanced degrees and practical training. A brief description of this process follows.

INDIA EDUCATORS COME TO MISSOURI

Alumni of MU pictured at a reunion at Orissa University with five MU representatives. Other India Institutions represented are the Assam Agricultural College, Jorhat; Assam Veterinary College, Genhati; Bihar Agricultural College, Sabour; Ranchi Agricultural College, Kanke; Veterinary College, Patna; Birla Agricultural College, Haringhata; West Bengal College, Calcutta. →

■ The Indian participants who come to Missouri seek two general types of training. Members of the College teaching staffs come seeking higher degrees. This advances the standing of both the individuals involved and the institutions they serve by improving their ability to teach and do research.

The second type of training is informal. It is provided when groups come to study our college experiment station methods and how we carry on extension education work in the rural communities.

ADVANCED DEGREE PROGRAM

Professors N. C. Panda and D. N. Borthakur are examples of the students who come for formal academic training.

Today, Prof. Panda, a highly trained poultry scientist, is adapting Missouri methods of raising poultry to India conditions at Orissa University of Agriculture and Technology in Bhubaneswar. He heads the Orissa University's Poultry Research Farm.

Just five years ago Prof. Panda was busily working on his master's degree in poultry husbandry under the guidance of Dr. E. M. Funk, Prof. Q. B. Kinder, and others at the University of Missouri. Later, while serving with the University of Missouri technical cooperation team in India, Kinder spent more time with Panda helping him plan and set up his Poultry Research Farm.

Funk and Kinder report that excellent progress is being made at this poultry farm. A line of Missouri hy-

Lingaraj Misra, who obtained a masters in Extension Education at MU in 1959, discussing a paddy demonstration with local farmers. →

L. N. Kar, right, with a group of his students discussing a potato demonstration.



brid laying hens has been introduced and is doing well locally. A program for poultry students to work in the hatchery laying houses, brooders, and broiler plants has been established so they will receive practical training.

Prof. Borthakur received a Ph.D. in Plant Breeding and Genetics from the University of Missouri in 1961 and returned to Assam Agricultural College where he now teaches advanced students and heads rice research in the state of Assam. He recalls, "I had excellent opportunities from the University (of Missouri) throughout my training period. My advisor, Dr. J. M. Poehlman, took keen interest and gave me all facilities so that I could receive all necessary training." (Poehlman later spent two years in India helping organize research and teaching programs at Orissa University.)

Lingaraj Misra, one of two Indians who are working with guidance from Cliff Meeker in setting up an extension education program in villages for Orissa University, received his M.S. in Extension Education at the University of Missouri in 1959. He is now project leader for field Agricultural Education work.

The other man working with Mr. Meeker, L. N. Kar, received his M.S. in Rural Sociology at the University of Missouri in 1963. He is professor of extension education on the teaching staff at Orissa University.

Both Misra and Kar believe in involving villagers in the planning of programs and taking part in them. Under their guidance village production committees are

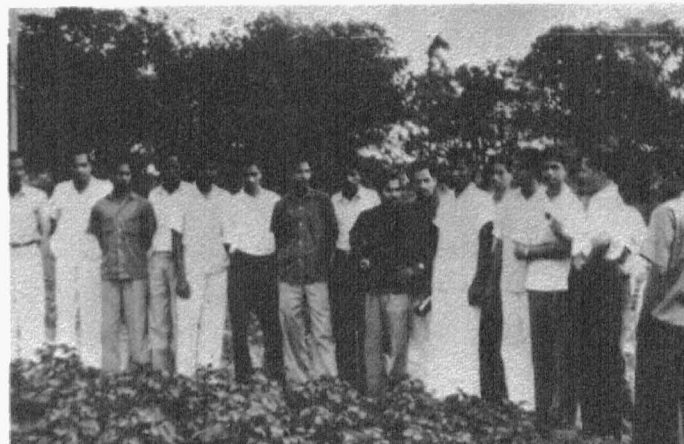
organized wherever a field agent is posted to sponsor and further the educational work.

Misra started field work with farmers of nearby villages soon after returning to Bhubaneswar from the University of Missouri. He quickly showed the effectiveness of extension education methods, particularly demonstrations, in persuading the cultivators to adopt new methods and ideas. In 1962 he helped with getting the U.S. AID-Government of India sponsored "Block Extension and Research Program" approved and attached to the University.

From the start in 1962, the University has expanded an extension program to include 10 field agents and four supervisory staff.

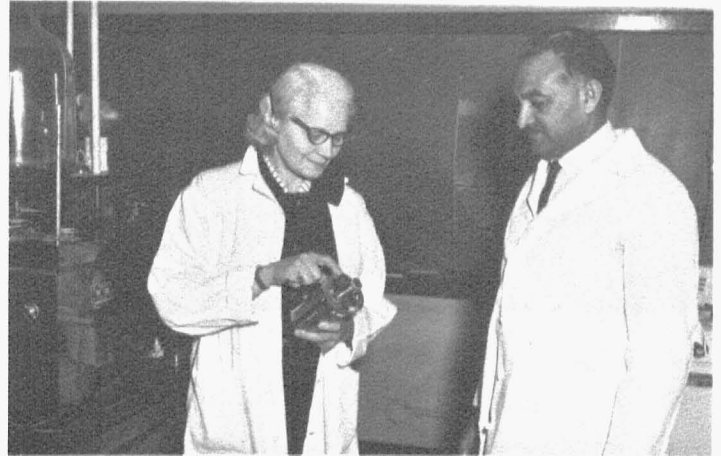
Agricultural Economics Department Chairman V. J. Rhodes, when he returned from a trip to Orissa with a study team, also commented on the striking results these two men and Meeker were obtaining. After thousands of years of caste system, it is extremely difficult for Indian teachers to overcome tradition and work with their hands as is often necessary in teaching by the extension demonstration method, Rhodes pointed out.

Misra and Kar and a number of the poultrymen learned in Missouri the satisfaction that can come through working with your hands and formed a new outlook toward practical experience which they are teaching to students. Hopefully, their enthusiasm will be catching because the results are so gratifying.





In typical program, Kaushal took 5 classes at MU;



... studied in laboratory;

INFORMAL COLLEGE FIELD TRAINING PROGRAM

The second type of training is illustrated by Hakim Singh Kaushal who is now teaching the know-how of Missouri County Extension Directors Marvin Dobbs and Hershel Gaddy to village extension workers in Gwalior, Madhya Pradesh.

Mr. Kaushal is principal of a District Extension Training Center, located not far from the famous Taj Mahal. There are 100 of these training centers throughout India. The principal or one of the instructors from 20 of these received training at the University of Missouri. Each principal has six to ten instructors under him and their function is to teach Gram Sevaks, village level extension workers, how to conduct local extension teaching programs. The Gram Sevaks are selected from students

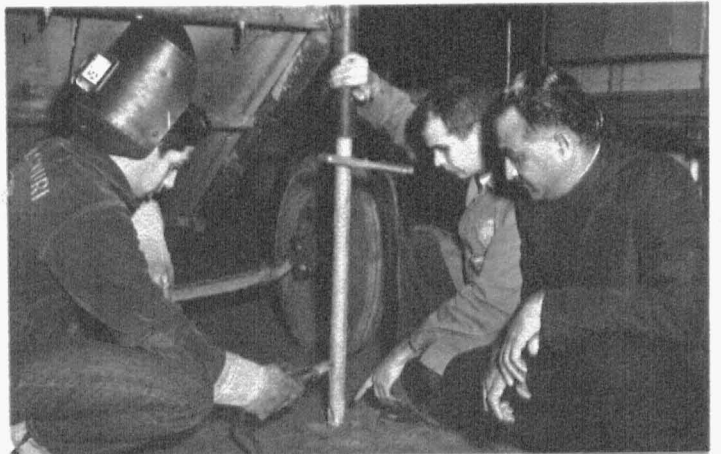
who have had about the equivalent of our high school training. They are given two more years intensive training in the Extension Centers. Principals and instructors of the centers are college graduates.

Mr. Kaushal came to Missouri with a group of 15 Extension Training Center teachers in the summer of 1964. He began his studies in Missouri with three weeks field experience in Dunklin County with County Extension Director Marvin Dobbs and three weeks in Saline County with Director Herschel Gaddy. Following this he enrolled in courses in Experiment Station Organization, Extension Administration, Extension Methods, Soil Conservation, Nutrition, and Health during the Fall semester at the University of Missouri.

... attended vocational ag class on small motors;

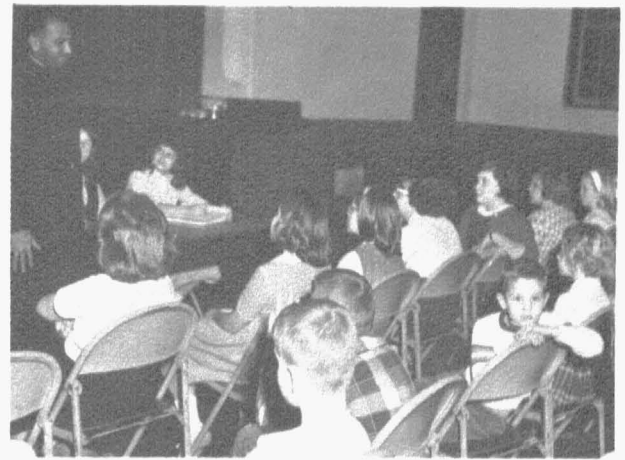


... and a welding demonstration;





... studied U. S. farms (in trench silo here);



... talked to 4-H Club members;

In February of 1965 he returned to Saline County for another five weeks of field experience. He traveled around with Gaddy, learning how Gaddy conducted demonstrations of improved practices with the help of local farmers, and how planning and staging of educational programs were carried out by committees and organizations.

Miss Bernice McVeigh also showed Mr. Kaushal similar mechanics of the women's Extension projects and Don Bailey introduced him to the workings of Saline County's 4-H program.

During his stay here Mr. Kaushal was impressed most by the 4-H Club program and the way it was conducted through voluntary leaders. "Through 4-H Clubs,

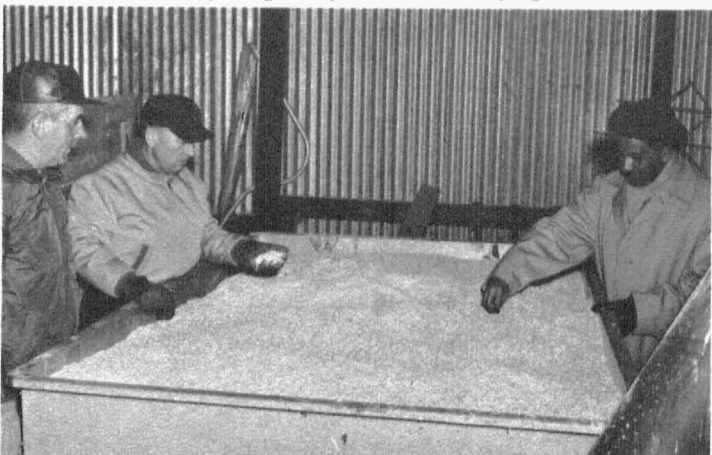
boys and girls start taking interest in various activities useful in their future life," he observed, and felt that preparation of the next generation through such a program held great promise for India.

In this Kaushal was typical of the Indian visitors. Twelve of the 15 in his group listed the 4-H program as one of the main things that impressed them most. Six mentioned the role of commercial organizations and their cooperation with extension workers. Others mentioned hospitality of people and farmers' faith in research. Four stated that hard work of farmers and the dignity of labor in the United States impressed them. Though the caste system is being abandoned in places, its influences linger and even the poorest farmers find still poorer farm hands wanting to work for them under India's surplus labor conditions.

Like nearly all participants, Mr. Kaushal was taken on guided tours to the soils and crops experiment stations, the University horticultural farm and the University dairy farm while in Missouri. During the holidays, the Indians are taken on educational trips to the American Royal at Kansas City, the southeast Missouri cotton area and the MFA cooperatives at Springfield.

Arrangements are also made for the participants to visit in American homes while they are on the campus or when they visit in various parts of the state. Indian students at the University have an opportunity to join the Indian Cultural Association and the Cosmopolitan Club to provide a more desirable social life while on the campus.

... discussed feeding with farmers and county agent.



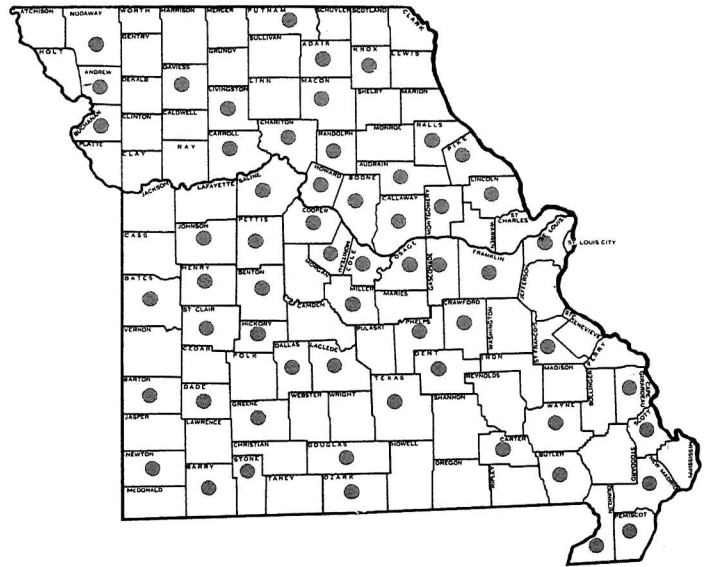
Examples on the preceding pages are only a few out of 384 Indian educators who have come to the *Show Me* state since 1957 to study ways to upgrade and modernize India's research and teaching.

One hundred-seventy-two Indian educators have received advanced degrees in Agriculture at the University of Missouri during the past eight years. Twelve of these received Ph.D. degrees while 160 were granted Master of Science degrees. Departments in which these degrees were granted were:

Extension Education	49
Veterinary Science	25
Dairy	20
Horticulture	10
Ag. Engineering	10
Poultry	10
Field Crops	10
Soils	9
Animal Husbandry	8
Entomology	7
Rural Sociology	7
Agr. Economics	4
Agr. Chemistry	3

In addition, 20 from India are now enrolled in the University working toward advanced degrees.

An equal number of people from India (192) have visited the University for shorter periods of training. Approximately 25% of these have been enrolled in at least one semester. For the most part they have come for shorter periods to get specialized training at the University or at other places in the state under University direction.



13 Departments at M. U. and 59 County Extension Centers Have Assisted with the India Project

**List of U. S. Technicians Who Have Served on the University of Missouri
U. S. AID Team in India**

<i>Name of Technicians</i>	<i>Subject Matter Field</i>	<i>Location</i>	<i>Period of Service</i>
Arnold W. Klemme	Group Leader and Soil Fertility Specialist	Calcutta	Oct. 57 to Jan. 62
Clarence E. Stevens	Agricultural Engineer	Jorhat	Jan. 58 to Jan. 60
Orion Ulrey	Agricultural Economist and Farm Management Specialist	Ranchi	July 58 to June 62
Everett H. Davis	Irrigation and Drainage Engineer	Calcutta	Nov. 59 to Nov. 61
Ide P. Trotter	Consultant in Education Administration	Bhubaneswar	Sept. 59 to Dec. 63
Walter T. Wilkening	Agricultural Extension Advisor	Sabour	April 60 to April 62
Harold Wm. Wood	Veterinarian	Gauhati	Sept. 60 to Oct. 62
Quinton B. Kinder	Poultry Specialist	Jorhat	Aug. 61 to Aug. 63
F. E. Rogers	Group Leader and Extension Specialist	Calcutta and Bhubaneswar	July 62 to July 64
C. R. Meeker	Extension Education Advisor	Bhubaneswar	Sept. 62 to —
J. M. Poehlman	Research Advisor	Bhubaneswar	Sept. 63 to May 65
Paul E. Johnson	Agricultural Engineering Advisor	Bhubaneswar	Jan. 64 to July 65
Marvin M. Parker	Farm Shop Tools Advisor	Bhubaneswar	July 64 to —
J. Wendell McKinsey	Group Leader and Agriculture Economics/Farm Management Advisor	Bhubaneswar	Nov. 64 to —