



DEC 14 1984

## Women in Development Management Workshop

A second successful management workshop for foreign students was held on May 13-19. The workshop was sponsored by ICASALS and was a project of the Women-In-Development, (WID), committee.

The overall goal of the workshop was to help students assume management responsibilities as they enter careers in their home country. The workshop explored the multiple roles that managers play; foreign students often are expected to enter management roles such as establishing new businesses, supervising workers, presiding at club meetings or even chairing political rallies once they return to their country.

The workshop addressed these problems and attempted to offer practical solutions. Topics covered included: management theory, planning, management of resources, leaders as agents of change, leadership styles, setting goals and objectives, delegating responsibility, managing conflicts and effective communication.

The leaders of the workshop were professors from Texas Tech University and other institutions as well as people from the business industry with international experience. Professors

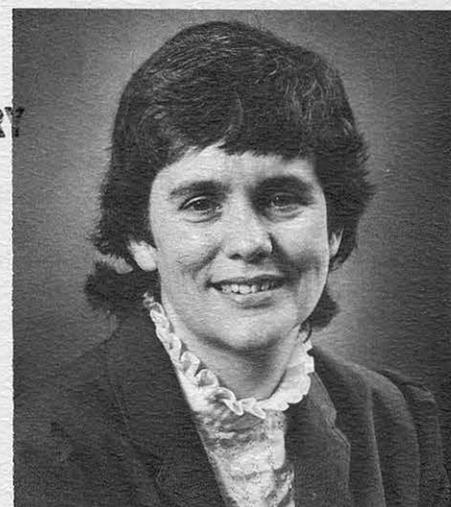
participating in the workshop were from the fields of agriculture, anthropology, business administration, food and nutrition, home economics, international education, mass communication and physical education.

Participants consisted of fourteen graduate and undergraduate students plus six students from last year who served as consultants for the workshop. The participants represented the following countries: Nigeria, Lesotho, Kenya, Swaziland, Cameroon, Mexico, Taiwan, Zambia, India, Panama, Senegal and Malaysia.

Keynote speaker, Dr. John Fischer, executive director of CID, Consortium for International Development, focused on the need for relevant management skills. He emphasized how management must operate relative to the culture in which it functions. He also spoke of the respect decision-makers must maintain at all levels of management in order to effectuate productivity and facilitate necessary change.

New features based on suggestions from last year's participants were incorporated into the workshop. One

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DR. BARBARA STOECKER

## Stoecker named to ICASALS position

Dr. Barbara J. Stoecker\* of Texas Tech's Department of Food and Nutrition recently was named Coordinator of Academic Affairs for the International Center for Arid and Semi-Arid Land Studies. The appointment was effective June 1.

Stoecker, who chairs the university's Women in Development unit, will advise and counsel graduate students in the arid lands option for the interdisciplinary master's program and the land use management doctoral program. Her responsibilities also will include curriculum development, scholarship awards, and expansion of the option.

Stoecker earned her doctoral degree at Iowa State University. In June she returned from an international selenium conference in the People's Republic of China. Her international experience includes four years at a nutrition research center in Thailand.

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\*throughout newsletter denotes person is an ICASALS Associate at Texas Tech University

The October issue of the ICASALS Newsletter will feature coverage of the KEW Conference on Economic Plants for Arid Lands during July in London, England. Also included will be interviews and coverage of visitors from Holland, France, Africa and an agricultural group from the People's Republic of China.

# ICASALS hosts international research groups

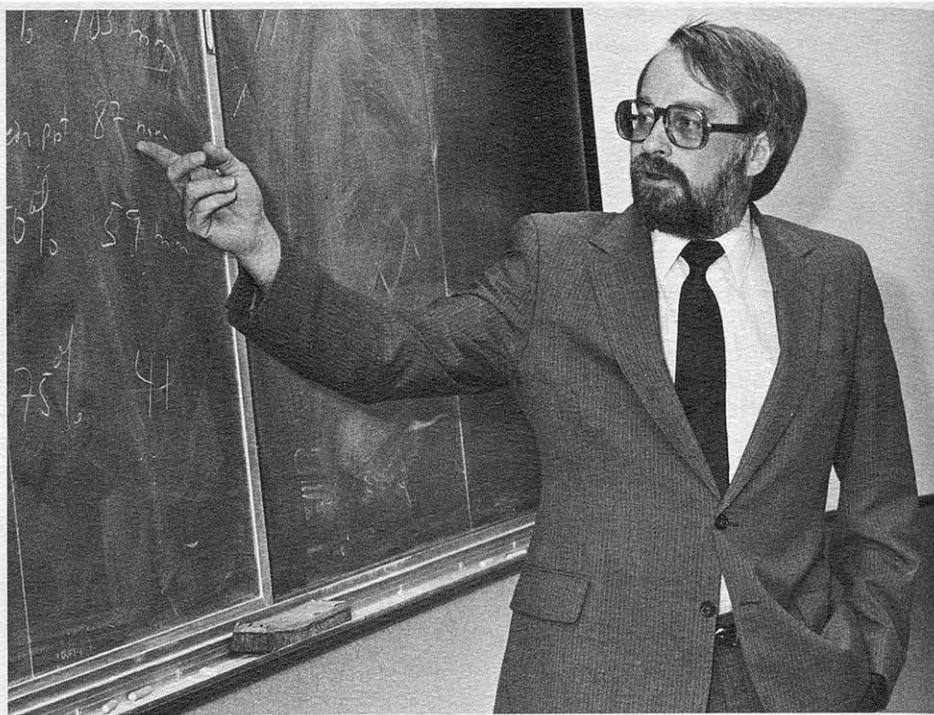
ICASALS arranged itineraries for several international visitors throughout the past few months. K. K. Sharma, research officer from the Forest Research Institute and Colleges in Dehra Dun, India, came to ICASALS in April and met with Robert Fewin of the Texas Forest Service office in Lubbock. He also met with Dr. Idris R. Traylor, Jr. and Dr. J. R. Goodin of ICASALS.

Eric Bromberg, an agronomist with a specialty in plant breeding, also visited Lubbock in April and investigated oil and meal seeds, extension methods, grains and grasses. Bromberg is administrator of a county agricultural society in Sweden.

Four officials from the Agricultural and Rural Development Authority in Zimbabwe met with officials from ICASALS and other campus units during their April visit. Haldane Melvill, Herbert Mushangi, Sanders Moyo, and Simon Siveregi observed irrigation procedures and experimental furrow diking equipment at a Texas A&M experiment farm. Dr. William Lyle of the Texas A&M Research and Extension Center escorted the group, which also met with Dr. James Supak, cotton specialist from the center. Dr. Billy Freeman of Texas Tech's agricultural economics faculty talked with the group about computer uses in agriculture.

Mr. Farid Reda Hassen-Khodja of Algiers met with Traylor in May. Hassen-Khodja is a commercial assistant for trade missions and seminars.

Dr. Raymond E. Meyer presented a Texas Tech seminar in May on dryland agriculture plans and activities of the Agency for International Development. Meyer is a soil and water management specialist in the Office of Agriculture of the Bureau of Science and Technology.



Dr. Raymond E. Meyer, group leader of Sonora expedition, presented a seminar at Tech.

## Appearance secondary in breeding stock

Cattle composition, production history and climate rather than appearance should determine herd choice if ranchers want to make a profit, says Robert A. Long of Texas Tech's Department of Animal Science.

A rancher will profit more if he selects breeding stock from herds maintained under similar climatic conditions as his ranch and on the basis of superior, complete and accurate performance records on the animals.

As an example, Long cited the incorporation of Brahman cattle in herds located in hot and humid areas to improve beef production. The Brahman get their heat tolerance from ample sweat glands in the back and neck and a lower basal metabolic rate. These factors result in the production of less body heat.

"Yet it is still a common belief among some cattlemen in the United States and Central and South America that the Brahman get their heat tolerance from their extra body surface—the loose skin at the throat and dewlap underneath, the hump and the large, pendulous ears," said Long.

Research has been conducted where the excess body surfaces have been surgically removed. Cattle with sweat glands but without the extra body surface have as much heat tolerance as those with excess body surface.

"Too many cattlemen still base their selection criteria on what the animal looks like rather than its reproductive capability, growth rate, carcass composition or longevity," said Long.

The Brahman are a good example of choice for climate, he explained. British breeds of Angus, Hereford and Shorthorn do not adapt as well the southeastern and southern United States and other subtropical and tropical areas of South America. Ranchers have incorporated the Brahman blood into those herds to help productivity through both adaptability and hybrid vigor.

Other research areas of Long are performance testing procedures, methods of determining the composition of beef cattle, and the importance of composition on production efficiency.

# Legislator hears area citizens

Members of the Texas Legislature were in Lubbock in April to gather important water information from more than 40 local citizens. The hearing was arranged by ICASALS for the House Subcommittee to Study the Economic Feasibility of the Utilization of Water Efficient Crops and the Conversion of Irrigated Land to Dryland Farming.

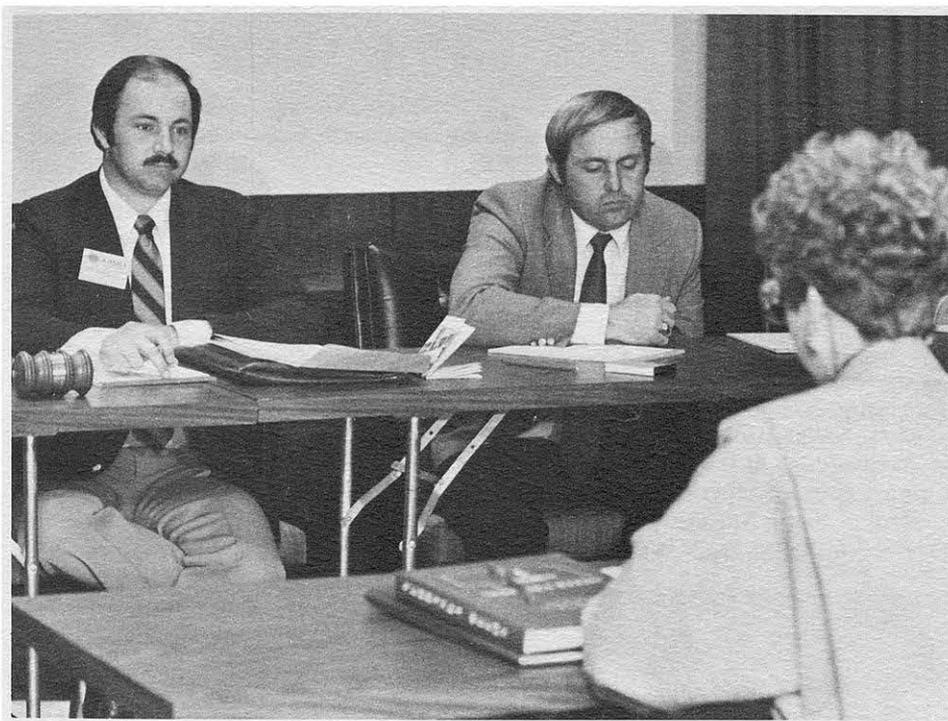
Subcommittee Chairman Steven Carriker, a farmer from Roby, called for oral testimonies from area farmers, ranchers, and representatives from the business and university community. The basic thrust of the testimony involved discussions of the economic problems of both dryland and irrigation farmers because of rising production costs and low commodity prices.

Testimony from farmers and ranchers dealt with the economic effects of conversion from irrigated to dryland farming as well as methods of maintaining or increasing

production from current dryland farming operations. Residue management and conservation tillage were cited as examples to provide wind and water erosion control.

Technical representatives discussed the importance of the High Plains region to state agricultural production and the value of this production to consumers in Texas, throughout the United States, and international markets. Current research and development, including new water efficient crops such as atriplex, were discussed, as were the production, harvesting and marketing limitations associated with some of the new crops.

Other legislators involved in the hearing were Rep. Robert Saunders, chairman of the House of Representatives Committee on Agriculture and Livestock, and Rep. Dudley Harrison.



(left to right) Steven Carriker, chairman of subcommittee, and Robert Saunders, chairman of committee, listen to testimony of Cathy Harrison, representing a local farm family.

## New AALS publication

A new publication was approved during the 1984 annual meeting of the Association for Arid Lands Studies (AALS), held in April in San Diego, California. **Forum of the Association for Arid Lands Studies**, selected short papers from the meeting, is expected to become an annual publication.

Voted president-elect and program chairman was Dr. Otis W. Templer\* of Texas Tech University. Dr. Robert H. Schmidt, Jr. of the University of Texas-El Paso will serve as president, succeeding Dr. John G. Hehr of the University of Arkansas. Dr. Idris R. Traylor, Jr. remains as executive director. AALS headquarters is at ICASALS.

Also during the meeting, the membership voted to raise annual dues to U.S. \$10.

A call for papers has been issued for the eighth annual

AALS meeting, scheduled April 24-27, 1985, in Fort Worth, Texas. Papers are welcomed on all topics related to arid lands studies.

Prospective participants should provide the title of paper; name, affiliation, address and telephone number of author(s), underlining the name of the person presenting the paper; and an abstract of 125 words or less. Deadline for submitting papers is November 15, 1984.

Those wishing to present papers, organize special sessions or chair sessions should contact Templer at the Department of Geography/Texas Tech University/Lubbock, Texas 79409; telephone (806) 742-3838.

AALS meets each year in conjunction with the Western Social Science Association.

# The Yaqui Symposium

Texas Tech University's fifth annual investigation of Native Americans focused on the Yaqui Indians of the Tucson, Arizona, and Sonora, Mexico, areas. The three-day April symposium featured the executive director of the Pascua Yaqui Association, university scholars, Yaqui dancers and musicians, and an exhibit of Yaqui photographs and artifacts.

**The Year of the Yaqui** also included expedition reports by anthropologists and historians who traveled to Sonora to observe firsthand changes in Yaqui lifestyle. The group, led by Robert G. Campbell of Texas Tech and Jane H. Kelley of the University of Calgary, compared their findings with the reports and films from three decades of Texas Tech expeditions.

Anselmo Valencia, executive director of the Pascua Yaqui Association, was keynote speaker for the symposium. Valencia spoke of Yaqui history and immediate Yaqui concerns in both Mexico and Arizona. He said that Indians must administer their own reservations, and stressed that the Yaquis must remain a nation, bring back their language and preserve their dances.

Yaqui dancers and musicians performed traditional ceremonial



(from left) Keynote speaker, Anselmo Valencia of Pueblo Association, and Dr. Evelyn Hu De-Hart of Washington University, MO. focused on Yaqui history and preservation.

dances including the Deer Dance. Performers included Valencia, Fernando Murillo, Juan Garcia, Peter Acuna, Frank Molina, Ygnacio Alvarez, Juan Amarillas, Steve Sanchez, Ronnie Varela, and Frank Flores.

Jane H. Kelley from the Department of Archaeology at the University of Calgary spoke on forms of social control in Yaqui Society. Evelyn Hu-DeHart, historian from Washington

University in St. Louis, Missouri, presented an overview of Yaqui history, including details of resistance and survival from the 17th century to present. Rosamond B. Spicer, an anthropologist from Tucson, spoke on the concept of enduring peoples, including the Yaquis, and the specific contributions of the Yaqui nation.

Thomas R. McGuire of the Bureau of Applied Research in Anthropology at the University of Arizona talked of audience, time and space in Yaqui ritual. Mary Elizabeth Shutler, anthropologist and dean of the College of Arts and Sciences at the University of Alaska, presented a paper on Yaqui healers.

The interdisciplinary symposium was highlighted by a session featuring remarks by Dr. William Curry Holden, who led the first of several Texas Tech expeditions from the 1930s through the 1950s. Holden and his wife Frances recalled significant events of those trips. A video, compiled from expedition films and scripted by Mrs. Holden, was also included during the commemorative session.

Slides, video and remarks by those involved with the 1984 expedition concluded the symposium. Participating were Campbell and Kelley, Dan L. Flores\*, Willard Rollings, and John R. Wunder\* of



(from left) Dr. Robert Campbell, co-leader of expedition, Dr. William Conroy, Dean of College of Arts and Sciences, and Dr. Clyde Jones, director of the Museum, discuss Sonora expedition.

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# Yaqui

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Texas Tech's Department of History; Ashton G. Thornhill\* and Dennis A. Harp\* of Texas Tech's Department of Mass Communications, and Laurie Nock of the University of Calgary.

"The Yaquis: An Enduring People" was the title of a three-month exhibit at The Museum, where all events took place. Included were artifacts and photographs acquired during prior expeditions and contemporary paintings and sculpture by Arturo Montoyo of Tucson.

Sponsors for the annual symposium are ICASALS, The Museum, and the West Texas Museum Association, other units of Texas Tech University, and the Lubbock Cultural Affairs Council.



Dr. John R. Wunder presents an award to Dr. & Mrs. W. C. Holden, recognizing their efforts in the study of arid lands.

## Open end spinning succeeding in West Texas

The textile industry is moving rapidly into open end spinning, which may signal good fortune for West Texas cotton producers, according to the director of Texas Tech's Textile Research Center.

"The High Plains may be the most important cotton-producing region in the United States in just a few years," said James S. Parker, "because the textile industry is moving rapidly into open end spinning."

Since the turn of the century, yarn has been produced primarily by ring spinning. The fiber characteristics which worked best on ring spinners became the standards by which others have been judged, said Parker.

However, the different process in open end spinning requires different fiber characteristics to work best. Parker said West Texas cotton matches the fiber properties best suited for open end spinning.

"What is important to ring spinning is not necessarily important to open end spinning and vice versa," said Parker. "The fiber properties most important in open end spinning are strength and fineness. Primary needs in ring spinning are fiber length and uniformity."

Although the two spinning methods developed in the United States about the same time, textile manufacturers adopted ring spinning as the preferred process. Open end spinning was reintroduced in the United States a little more than a decade ago after considerable success was reported with the method in Czechoslovakia.

In the early 1970s, more than 98 percent of all textile manufacturers used ring spinning, said Parker. Today about a quarter of the spinning in this country is done by open end machines. He said the figure may rise to more than 75 percent during the next 10 years.

The switch in strategy has come so suddenly throughout the U.S. textile industry that manufacturers report a two-year delay between the time they place their orders and the time open end spinning machines can be delivered, Parker noted.

Cost is a major advantage of open end spinning over the other method, said Parker. Figures compiled by Helmut Deussen, president of the Research and Engineering Division, American Schlafhorst Company in Charlotte, North Carolina, showed automated open end spinning could produce .5 kilograms of 30/1 yarn of 100 percent cotton for 2.7 cents. A pound of the same yarn on automated ring spinning would cost slightly less than 5 cents.

The difference between open end and ring spinning is the way the twist is put in the yarn. In open end spinning the cotton is fed into a rotating chamber and the fiber tumbles around itself. In ring spinning the twist is given to the yarn by a revolving bobbin. The twist is regulated by the drag of a small metal loop sliding on a ring around the bobbin.

The varied fiber characteristics necessary to operate open end spinning machines at first caused textile manufacturers to stick with existing ring spinning equipment.

# The Ogallala Aquifer Symposium

More than 100 water experts from around the country convened in the Lubbock Memorial Civic Center June 4-7 for the second Ogallala Aquifer Symposium. The focus of the symposium, sponsored by the High Plains Water District, the Panhandle Water District, the U.S. Geological Survey, Texas Tech University, Oklahoma State University, and the Lubbock Chamber of Commerce, was on advancements and developments designed to provide for better management and understanding of the aquifer that have been made since the first Ogallala Aquifer Symposium was held in Lubbock in 1970.

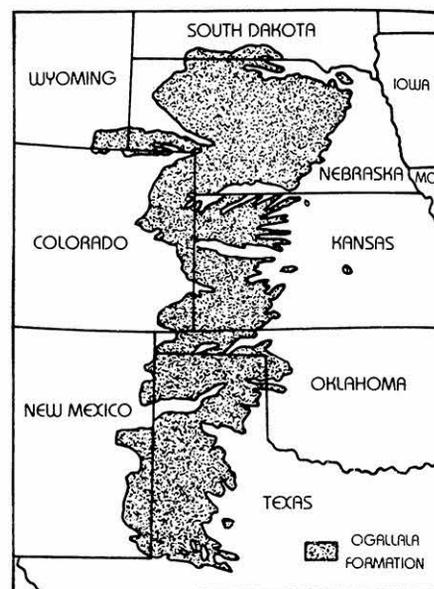
Presentations made by the forty speakers who participated in the technical sessions ranged from quantitative and economic projections to legal aspects of groundwater management to the latest research efforts aimed at extending the life of the Ogallala.

The general consensus among attendees and participants alike was

that while the rate of decline of the aquifer has slowed in most of the Ogallala states, research directed toward improved conservation and augmentation practices, better management strategies and refined analytical techniques for describing and understanding the aquifer must be increased and intensified if the aquifer is to remain economically viable far into the 21st century. Most were optimistic about maintaining irrigation at near current levels through 2020, but cautioned that in addition to research, planning and coordination are essential to sustaining agricultural production in the High Plains.

Approximately fifty people participated in one of two field trips and saw first hand either newly developed technology, and equipment to apply, monitor or augment the supply of irrigation water or several geologic characteristics of the Ogallala Aquifer.

The conference proceedings are expected to be available later this summer, and copies may be obtained from the Texas Tech University Water Resources Center for U.S. \$30.



## Secondary recovery from Ogallala Aquifer

The release of water from the wet sands of the Ogallala Formation, a process commonly referred to as secondary recovery has been under study by the High Plains Underground Water Conservation District, Texas Tech University, Texas A&M University, and the Texas Department of Water Resources for the next four years. The most recent secondary recovery project is currently being conducted inside the city limits of Wolfforth, Texas, on property owned by the Wolfforth Co-op Gin. The City of Wolfforth is financially supporting the study as well as providing field support as needed. The study indicates that significant volumes of capillary water are in storage in the High Plains area. If only a small portion of the water can be recovered, the available supply of water in our area will be significantly increased.

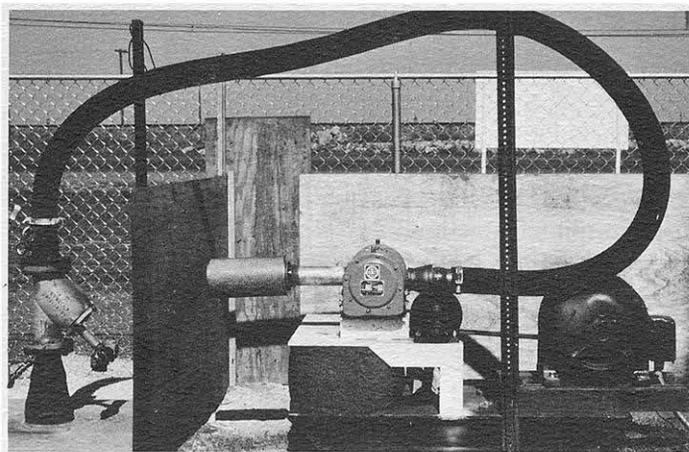
The current test at the Wolfforth secondary recovery site is directed at reducing the costs of releasing capillary water into the water table by the injection of low volumes of air under low pressure into the wet sands of the aquifer by using a small air

compressor powered by electrical energy.

Current formation core samples taken from a lower sand section below the rock lense indicate a moisture content in excess of field capacity. Water in excess of what the soil would normally hold against the forces of gravity is in this section and is moving downward to the existing water table through the natural forces of gravity. It is hoped that the injection of air into this section will enhance the release of excess water downward into the water

table and further release much of the water held by capillary forces in this sand section after the moisture content drops below field capacity.

After six days of air injection at the Wolfforth site, the water level 60 feet from the air injection hole not only regained the two feet lost to earlier irrigation pumpage, but gained an additional ten feet. Furthermore, no damage to the sands has been noted. In essence, the depth to water below land surface has risen from 150 feet to 138 feet.



Air injection system at Wolfforth site.

# Management skills emphasized in workshop

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of the new activities most enthusiastically received by the participants was the management practicum. The practicum gave students the opportunity to spend a day with a successful manager from the Lubbock area in order to observe a manager in action in an actual managerial environment. Ten local businesses participated including: a bank, an insurance company, a sporting goods manufacturer, and various agricultural manufacturers. Another well received activity was the

use of actual case studies which revealed to students specific applications for their studies. Of particular interest was a case study of the Agency for International Development project in Senegal which helped the foreign students to more adequately visualize and identify with the resource allocation problems they will be responsible for in their own countries.

Finally, the workshop tried to prepare the foreign students for re-entry into their native country by making them

aware of what they might expect; that during the time spent away, both they and their home environment will have changed. The exchange of experiences and ideas among the participants created a camaraderie of understanding and encouragement to deal with the re-entry problems they will encounter.

ICASALS presented certificates to the new participants and consultants to serve as evidence to colleagues in their homeland of their work and development of management skills.



Carolyn Ater, coordinator of workshop, consults Chung Hsiung Yeh, a graduate student in electrical engineering from Taiwan.

## Upcoming international meetings

**The Fourth Meeting of Technological Exchange in Arid and Semiarid Zones** will be April 26-27, 1985, in Villa Dolores, Cordoba, Argentina. Organized by the University of La Rioja, the University of Catamarca, the government of Cordoba, the Secretary of Science and Technology of the Nation, and La Magdalena Seed Farm. Invited speakers and tours are on the program.

For more information, contact Ing. Ricardo Ayerza (h)/Cerrito 822-7 piso/(1010) Buenos Aires/Argentina;

telephone 46-4425/9185/1096; Telex 18857 GAPSA AR.

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**The First International Conference on Rural Water Systems** is scheduled October 15-17, 1984, in Bangkok, Thailand. Topic areas include basic needs of rural water, state of the art by manufacturers, water resource management and research, and finance. The conference is sponsored by International Construction, Asian Building and Construction, Asian Institute of Technology, and the Technology Transfer Institute of

Japan. For more information, contact Christine Jones/Reed Conferences/Room 1313/Surrey House/Throwley Way/Sutton, Surrey SMI 4QQ/Great Britain; Telex 946564 BISPRS G; telephone 01-643-8040 extension 4892.

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**Water and Water Policy in World Food Supplies** is the theme of the International Conference on Food and Water, scheduled at Texas A&M University from May 26-30, 1985. Topics include world development from 1985 to 2000; constraints to increasing world food supplies; water

as a constraint; irrigation and drainage; new technology related to water and water policy; engineering and water management; the role and choice of water policy; institutions in water management, policy development and food production; the role of national governments, international agencies, bilateral agencies, the private sector and universities in international water and agricultural development.

For more information, contact Dr. Jack L. Cross/International Conference on Food and Water/Texas A&M University/College Station,

Texas 77843; telephone (409) 845-9519.

\* \* \*

**The International Symposium on Karst Water Resources** is scheduled July 7-19, 1985, in Ankara and Antalya, Turkey. Organized to bring together interdisciplinary karst specialists from various parts of the world, the symposium will feature a week of technical papers on hydrogeology, geochemistry, modeling, laboratory testing, tracer techniques, geophysics and other exploration methods, land subsidence and sinkhole formation, remote

sensing techniques, ground water and surface water hydraulics and interpretation, engineering properties and problems, water-supply estimation, and irrigation potential and practice.

The second week of the conference will feature field trips. For more information, contact Gultekin Gunay/Hydrogeological Engineering Department/Hacettepe University/Engineering Faculty/Beytepe, Ankara, Turkey; or A. Ivan Johnson/Woodward-Clyde Consultants/7600 East Orchard Road/Harlequin Plaza North/Englewood, Colorado 80111.

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**ADDRESS CORRECTION REQUESTED**

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