



RUMINATIONS

NEWSLETTER OF THE GLOBAL LIVESTOCK COLLABORATIVE RESEARCH SUPPORT PROGRAM



Volunteers, Eric Schwietz and Amanda Freschauf, stand amongst the children participating in the GL-CRSP nutrition project study. The Child Nutrition Project concluded data collection for Cohort I in July and will begin data analysis this year. October begins a new phase of activities for the Global Livestock CRSP. Photo by Charlotte Neumann.

New Phase of Global Livestock CRSP Activities Begins

GL-CRSP Program Director, Dr. Montague Demment, is pleased to announce the results of the Global Livestock CRSP project renewal competition. The following projects have been selected for a continuation three year grant.

In Latin America, the Livestock-Natural Resource Interfaces project has taken on a new title that emphasizes the focus which emerged from the first three years of work. Now known as the *“Community Planning for Sustainable Livestock-Based Forested Ecosystems”*, the project will work with rural farming communities with substantial

livestock components in forested mountainous areas of Ecuador, Bolivia and Mexico. Activities are built upon a participatory approach with local communities to enhance

their abilities to improve quality of life and achieve a sustainable approach to the conservation of the biodiversity, natural forests, and watersheds in the region.

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Global Livestock CRSP Links Universities & Institutions Addressing Livestock-Related Problems in Central Asia

The Livestock Development and Rangeland Conservation Tools project (LDRCT) of the GL-CRSP serves as a linkage between institutions that are addressing livestock and related problems in Central Asia. UC Davis, USDA, Utah State University, South Dakota State University, ICARDA, ILRI and NACAR all collaborate in the LDRCT. More specifically, NACAR, UC Davis, ILRI, ICARDA and IFAD are investigating the main problems faced by smallholders in Kazakhstan and Uzbekistan.

Lack of forage during the winter is one of these problems identified by most of the producers and scientists interviewed in the region. Lack of channels to extend technical knowledge and to link regional research institutions and producers is a second global problem that resulted from the dramatic economic, political and social changes in the last 10 years. Several projects have been designed and are underway

Ever wonder what all those acronyms mean...

Turn to back page for a mini-glossary.

to address these problems and we report progress on a few of them below.

IFAD Supported Activities

Farm monitoring and intervention

The main goal of this activity will be to involve agricultural research systems, universities and farmers in the identification and solution of livestock problems and to develop collaboration between UCD and Kazakhstan Agrarian Universities in preparing qualified experts for the livestock sector. Major forces discouraging the development of rangeland-based livestock production will be revealed through surveys with farmers.

During September 2000, students from the Zoological Engineering and Veterinary Faculty of Kazakh State Agrarian University and post-graduates from the Kazakh Research Sheep Breeding Institute were interviewed and selected to conduct monitoring of sheep farms in the Almaty and Akmola Oblasts.

A survey tool has been drafted and farms selected for surveying. This work is currently under the leadership

of Dr. Nurlan Malmakov from the Sheep Breeding Institute of Kazakhstan. Dr. Egeubaev of the Agrarian University in Almaty is collaborating with him in this effort.

Simulation model of sheep production

A mathematical model of sheep production systems is being adapted to production conditions of key sheep production areas of Central Asia in order to further understand constraints to production and to plan policy and management at a regional scale. Work on this component began in August 2000 with efforts concentrated on establishing working relationships with all partners.

In addition to drafting several memorandums of agreement two sampling areas were identified within the Bukhara Reserve. It was agreed that Dr. Nikolayev will collaborate in the parameterization of the Sheep Model for Central Asia conditions, the design of simulation experiments, and in the development of a link between the model and GIS databases.

Finally, databases were designed during meetings in Samarkand for use in analyzing previous

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Pastoral Risk Management Project Holds Third Annual Planning Meeting



The Third Annual Project Planning Workshop for the Pastoral Risk Management (PARIMA) project, was held July 10 and 11 at Egerton University, Njoro, Kenya. During the meeting, participants reviewed progress in research, outreach, and training during the third year of the project and fine-tune work plans for the coming year. The project operates in southern Ethiopia and northern Kenya.

Front Row (left to right): Dr. D. Layne Coppock (PI-PARIMA, Utah State University); Mr. Roger Kamidi (Data Analyst-A-AARNET, ILRI Nairobi); Mr. John Tangus (GL-CRSP sponsored M.Sc. student); Prof. R.S. Pathak (Chairman, Department of Horticulture); Dr. F.K. Lelo (Chairman, Department of Environmental Sciences); Dr. D.K. Too (Chairman, Department of Natural Resources); and Dr. Getachew Gebru (Post-doctoral associate, PARIMA, Utah State University).

Middle Row (Left to Right): Prof. A.A. Aboud (Dean, Faculty of Environmental Studies & Natural Resources and PARIMA regional co-

leader); Dr. Wanjiku Ciuri (Dean, Faculty of Education, Laikipia College Campus); Dr. Cheryl Doss (PARIMA team member, Yale University); Dr. Solomon Desta (Post-doctoral associate, PARIMA, Utah State University), Dr. B.K. Njehia (Chairman, Department of Agricultural Economics & Business Management—just above Dr. Desta); Dr. K. Mosonik arap Korir, (Dean, Faculty of Arts & Social Sciences); Mr. Clement Lenachuru (GL-CRSP sponsored M.Sc. student); Ato Mulugeta Shibru (GL-CRSP sponsored M.Sc. student); and Mr. Moses Esilaba (GL-CRSP sponsored M.Sc. student).

Back Row (Left to Right): Dr. John McPeak (Post doctoral associate, PARIMA, Cornell University); Dr. Peter Little (Co-PI, PARIMA, University of Kentucky); Dr. Michael Fleisher (Post doctoral associate, PARIMA, Utah State University); Dr. Chris Barrett (Co-PI, PARIMA, Cornell University); and Mr. Kulu Admassu (PARIMA field assistant). 📷

For more information on this project, please contact Dr. Layne Coppock, Utah State University, Dept. of Rangeland Resources, Logan, Utah 84322-5230. Email: lcoppock@cc.usu.edu.

Training & Capacity Building Focus of LEWS Workshops

Livestock Early Warning Project is actively engaged in training and capacity building of the collaborating scientists and institutions in the National Agricultural Research Systems in East Africa. These activities are

designed to improve the National Agricultural Research (NAR) scientists' ability in use of LEWS tool kit - spatial analysis tools, biophysical models and NIRS fecal profiling technology packaged as an early

warning and mitigation tools for livestock and as a natural resource management tool. The overall goal is to enable the NAR scientist to carry out their missions regarding building appropriate institutional infrastructure for early warning for livestock and to contribute to solving natural resource problems. Towards this end, a series of workshops were conducted in East Africa recently in the areas of biophysical models, NIRS fecal profiling technology and Spatial Characterization tools.

Dr. Jean Ndikumana discusses the LEWS project's regional coordination at the Biophysical Modeling Workshop in Nairobi. Photo by Abdi Jama.



CRSP Livestock Early Warning System Biophysical Modeling Workshop

A Global Livestock CRSP workshop on biophysical modeling was held at the International Livestock Research Institute (ILRI) in Nairobi, Kenya from 20-24 June 2000. A total of 13 persons participated in the workshop: 11 persons from LEWS monitoring zones in

Ethiopia, Uganda, Tanzania, and Kenya; one representative from the ILRI Crisis Mitigation Office; one representative from the Kenya Arid Land Resource Management Project, Office of the President.

Four of the participants were women. Two facilitators from Texas A&M University ran the workshop with the assistance of two ASARECA sponsored staff from the

Crisis Mitigation Office at ILRI.

The main objectives of this training was to bolster the participants' ability in applying PHYGROW and NUTBAL biophysical models, and to introduce the participants to new functionalities of PHYGROW and NUTBAL. It was also intended to strengthen collaboration among zonal teams and between zonal teams and the Texas A&M LEWS team

Participants included: Zinash Sileshi, Country Coordinator in Ethiopia; Stephen Byenkya, Central and South Western Zonal Coordinator in Uganda; Sarah Ossiya, LEWS team member, NIRS regional trainer

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LEWS team members from Uganda, Tanzania and Kenya listen to presentations during the workshop. Photo by Abdi Jama.

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Participants of the NIRS technology training included from left to right: Doug Tolleson, Francis Mwangi, Jane Sawe, Sarah Ossiya, Francis Nganga, Constantine Shayo, Dr. Rose Omaria, Corretha Ngwando, Robert Kaitho, Mary Ngowi, and Peter Kamau.

Photo by Sarah Ossiya



for LEWS, North Eastern Uganda Zonal Coordinator; Stella Bitende: Division of Research and Development, country coordinator in Tanzania; Nicholas Massawe, Northern Tanzania Zonal Coordinator; Angello Mwilawa, Central Tanzania Zonal Coordinator; Suleiman Kaganda, Western Tanzania Zonal Coordinator; Peter Kamau, Northern Kenya Zonal Coordinator; William Mnene, Country coordinator; Peter Wandera, Southern Kenya Zonal Coordinator; Jane Sawe, LEWS team member, Northern Zone of Kenya; Roger Kamidi, ASARECA Crisis Mitigation Office in Nairobi Kenya; Salim Shaabani, Aridland Resource Management Project, Office of the President in Kenya; Philip Leparateleg, Drought Preparedness Intervention and Recovery Program, Office of the President in Kenya.

Instructors were: Dr. Robert East, Texas A&M University; Dr. Abdi Jama, Texas A&M University; Dr. Robert Kaitho, ILRI/LEWS, Nairobi; Mr. Raphael Marambii, ILRI-ASARECA Crisis Mitigation Office.

LEWS Team Conducts Near Infrared Reflectance Spectroscopy (NIRS) Technology Training

Livestock Early Warning System team members and associated scientists interested in utilizing near infrared reflectance spectroscopy (NIRS) technology attended a 5 day (July 3-7, 2000) training session in Naivasha, Kenya. The training was conducted by Mr. Doug Tolleson, Assistant Director of Texas A&M University's Grazingland Animal Nutrition (GAN) Lab. Dr. Robert Kaitho (ILRI) coordinated the training and provided logistic support. Dr. Sarah Ossiya assisted in teaching the basic use of the NIRS system. Ten participants attended the session, 5 from Kenya, 3 from Tanzania, and 2 from Uganda. Five of the participants were female. Because of this training, NIRS work generated in the 3 participating countries can now be analyzed in Kenya. Fecal samples have previously been sent to the NIRS lab in Ethiopia

or to the GAN lab at Texas A&M in College Station, Texas to allow cross-machine validation. The trainees from Tanzania are now positioned to set up in Dar-Es-Salaam next month.

Attending from Tanzania: Dr. Constantine M. Shayo, Livestock Production Research Institute, Mpwapwa; Mrs. Mary Dgodath Ngowi, Animal



Samuel Ole Sinkeet

Disease Research Institute, Dar-Es-Salaam; Miss Corretha James Ngwando, Animal Disease Research Institute, Dar-Es-Salaam. Attending from

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Child Nutrition Senior Staff Pursue New Challenges

A major change in the GL-CRSP Child Nutrition Project research team will occur this coming year. With the conclusion of data collection from Cohort I this past July, the research team moves into a new phase of the project.

Mrs. Rosemary Ngaruro, Embu District Nutritionist, will pursue a Master's degree in Public Health Nutrition at the London School of Hygiene and Tropical Medicine. Mrs.



Edith Mukudi

Ngaruro was seconded to the Child Nutrition project by the Kenyan Ministry of Health. In the early stages of the project, Mrs. Ngaruro was instrumental in the development of recipes for the controlled inter-

vention study. She went on to take full responsibility for the central kitchen and served as community liaison. She will be using data from the project for her Master's thesis.

Ms. Monika Grillenberger has entered the doctoral program in Nutrition at Wageningen University in the Netherlands. Her doctoral work will be focused on the anthropometry and morbidity studies she conducted through the GL-CRSP project.

Dr. Edith Mukudi, who served as the project Field Coordinator, has accepted a tenured-track position as asst. professor in the Dept. of Comparative Education and the Dept. of African Studies at UCLA. Her ongoing research will utilize data from the Child Nutrition Project.

Ms. Constance Gewa will assume the duties as new field coordinator for the



Rosemary Ngaruro (left) and Connie Gewa (right) sort serving bowls for githeri. Photo by Katherine Lui.

completion of field work for Cohort II (non-CRSP funding). She is planning to start doctoral studies in Nutrition/Public Health in September 2001. Ms. Gewa is applying to a number of universities, including University of California at Los Angeles.

The GL-CRSP Child Nutrition project has always felt it important to recruit as many Kenyan women as possible who would assume senior positions of leadership in the University or Government of Kenya. These women have served as role models and mentors for the younger scientists and women in the communities of Embu District. We are pleased that their experience in the Child Nutrition Project has led to these new challenges and further education. ☛☛



Monika Grillenberger (right) with team of enumerators collecting anthropometry and morbidity data. Photo by Susan Johnson.

Value of Mulberry Foliage Subject of LDRCT Study

By Morgan P. Doran

Mulberry trees (*Morus alba*) are well known throughout the world for their delicious fruit and for providing a primary food source to silk producing worms that preferentially feed on its leaves. However, less well known is the feeding value of the large and palatable mulberry leaf for ruminant livestock.

In Central Asia there is a tremendous potential for livestock producers to supplement their animals with preserved mulberry foliage during the critical winter months. Many regions in Central Asia are home to both functional and abandoned silk producing industries that have relied on an extensive cultivation of mulberry trees.

Dr. Emilio Laca and Morgan Doran of the University of California, Davis (UCD) in collaboration with the Kazak Sheep Breeding Institute in Kazakhstan, the Livestock Research Institute and the Sericulture Research Institute in Tashkent, Uzbekistan are currently investigating the utilization of mulberry foliage in sheep rations. The study is a component of the GL-CRSP Livestock Development and Rangeland Conservation Tools Project and is funded in part by the GL-CRSP, IFAD (through a grant to ICARDA.) and the University of California, Davis.



Morgan Doran, center, helps harvest mulberry foliage at the Uzbek Sericulture Research Institute in July 2000. Photo by Oscar Djuraev.

In July and August of this year, experiments in Kazakhstan and Uzbekistan were established to compare methods of mulberry foliage conservation and the performance of sheep fed different concentrations of mulberry foliage. In both countries approximately 4 tons of fresh mulberry foliage were harvested and preserved for a feeding trial due to begin in early February 2001.

In Uzbekistan, foliage was provided by the Uzbek Sericulture Institute and transported to the experiment site on a private farm south of Tashkent. Mulberry foliage in Kazakhstan was harvested from several small plantations that once served cottage silk industries in southern Kazakhstan. Foliage was prepared on site and then

transported to the experiment site at the Kazak Sheep Breeding Institute.

The Uzbek Livestock Research Institute and the Kazak Sheep Breeding Institute will conduct the feeding trials and laboratory analyses will be performed at UCD. In addition to the Central Asia experiments, Dr. Emilio Laca, Dept. of Agronomy and Range Science, and Dr. Roberto Sainz, Animal Science Dept. at UCD have funded research to assess the nutritional value of mulberry foliage grown in the Central Valley of California. Results from foliage harvested in 1999 indicate a mean crude protein content of 21% and mean NDF (neutral detergent fiber) of 20%. The *in situ* or *in sacco* digestibility (at 36 hours) of

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Training & Capacity Building Focus of LEWS Workshops

Uganda: Dr. Rose Omaria, Namulonge Agricultural and Animal Production Research Institute, Kampala. Attending from Kenya: Francis Gakuo Nganga, National Animal Husbandry Research Center, Naivasha; Francis Ndegwa Mwangi, National Animal Husbandry Research Center, Naivasha; Peter N. Kamau, Egerton University, Department of Animal Science, Njoro; Jane J. Sawe, Egerton University, Department of Animal Science, Njoro; Dr. John Kariuki, Deputy Centre Director, National Animal Husbandry Research Center, Naivasha.

Also visiting the training session: Samuel Ole Sinkeet, Center Director, National Animal Husbandry Research Centre, Naivasha; Dr. Ephraim



Dr. John Kariuki, Deputy Centre Director, National Animal Husbandry Research Centre Naivasha, Kenya scanning samples with NIRS machine under the supervision of Doug Tolleson. Photo by Robert Kaitho.

Mukisira, Assistant Director, Kenya Agricultural Research Institute.

Instructors were: Mr. Doug Tolleson, Grazingland Animal Nutrition Lab, Texas A&M University; Dr. Sarah Ossiya,

Serere Agricultural and Animal Production Research Institute, Soroti.

Almanac Characterization Tool (ACT) Training

Training in the use of Almanac Characterization Tool (ACT) and Arcview were conducted for personnel of Livestock Early Warning System (LEWS) in Kenya, Tanzania and Uganda. During the workshop, the existing ACT functionality were reviewed and the new ACT utility tools were explored. In Kenya, the training was held at ILRI - Nairobi on 13th and 14th July 2000 and also on 3rd and 4th August 2000. A total of 6 people attended the training. The participants consisted of LEWS and CMO/ILRI/

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Dr. Montague Demment, left, Director of the Global Livestock CRSP visited workshop participants in Nairobi. Pictured from left to right, Dr. Tag Demment, Dr. Jean Ndikumana (A-AARNET Co-ordinator), Dr. Peter Wandera (Southern Kenya LEWS team member) and Mrs. Jane Sawe (Northern Kenya LEWS team member).

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ASARECA staff. A separate ACT training workshop was conducted for ILRI staff on 10th and 11th July 2000, in which 29 people attended.

In Uganda, the ACT training was held at NAARI - Agricultural & Animal Production Research Institute at Namulonge on 18th and 20th July 2000. Six people attended the training. The participants included the LEWS zonal coordinators, team members and the country coordinator.

In Tanzania the ACT training workshop was held at the headquarters of the Selian Agricultural Research Institute at Arusha on 27th and 28th July 2000.

Participants at the Kenya Workshop were: Raphael Marambii, ILRI Crisis Mitigation Office; Jane Sawe, Egerton University, Dept of Animal Science; Peter N. Kamau, Egerton University, Dept of Animal Science; Wandera F. Peter, KARI, Katumani National Dryland Research Center; Robert Kaitho, International Livestock Research Institute; Roger Kamidi, ASARECA Crisis Mitigation Office.

In Uganda: Dr. Sarah Ossiya, Serere Agricultural & Animal Production Research Institute; Dr. Rose Omaria, Namulonge Agricultural & Animal Production Research Institute; Albinus G. Odur, Namulonge

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LDRCT Studies Value of Mulberry Foliage

leaves and stems combined was 80%. The *in vivo* digestibility will be determined later this year utilizing yearling wethers. The high nutritional value and a potential productivity of 20 tons hectare⁻¹ (Shayo 1997) suggest that mulberry tree foliage could provide a consistent and high quality supplement to roughage-rich diets common in Central Asian livestock operations.

Reference: Shayo, C.M. 1997. Uses, yield and nutritive value of mulberry (*Morus alba*) trees for ruminants in the semi-arid areas of central Tanzania. *Tropical Grasslands* 31:599-604. 📄

For more information, please on these projects please contact Morgan Doran, Email: mpdoran@ucdavis.edu or Dr. Emilio Laca, Dept. of Agronomy and Range Science, University of California, Davis, CA 95616. Email: ealaca@ucdavis.edu.

Agricultural & Animal Production Research Institute; Namazzi Clementine, Namulonge Agricultural & Animal Production Research Institute; Steven Byenkya, Namulonge Agricultural & Animal Production Research Institute; Dr. Cyprian Ebong, Namulonge Agricultural & Animal Production Research Institute.

In Tanzania: Angello Joseph Mwilawa, Livestock Production Research Institute; Daniel M. Ko, Livestock Production Research Institute; Ezekiel H. Goromels, Livestock Production Research Institute; Dr. Nicholas F. Massawe, Selian Agricultural Research Institute; Margaret Nana Kingawkono, Selian Agricultural Research Institute; Muhidin Hassan, Selian Agricultural Research Institute;

Peter M. Latonga, Selian Agricultural Research Institute; Peter Xaneny, Selian Agricultural Research Institute; Gonzaz Kazimoto, Selian Agricultural Research Institute; Timothy D. Semuguruka, Selian Agricultural Research Institute.

The instructor was Eric Muchugu, GIS Specialist at the Blackland Research Center of the Texas A&M University System. 📄

For more information on the workshops or LEWS project, please contact Dr. Jerry Stuth, Dept. of Rangeland Ecology & Management, Texas A&M University, College Station, TX 77843-2126. Email: j-stuth@tamu.edu. Or Abdi Jama, Dept. of Rangeland Ecology & Management, Texas A&M University, College Station, TX 77843. Fax: (409) 845-6430. Email: aajama@cnrit.tamu.edu.

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New Phase of Activities Begins for Global Livestock CRSP Projects

The project researchers see community level participation and planning as essential to the future success of the development goal. The first three years of the project has shown that the interaction of livestock and natural ecosystems, including forests, is more extensive and pervasive than previously known. The project will continue to be led by Principal Investigator, Dr. Timothy Moermond of the University of Wisconsin - Madison.

In Central Asia, the *“Livestock Development and Rangeland Conservation Tools”* project takes an integrated multidisciplinary approach to improve the welfare of small landowners, to prevent further deterioration of rangelands, and to document their role as carbon sinks. The rangelands of the Central Asian region may constitute a significant part of the “missing sink” that attenuates the increase in atmospheric carbon dioxide. This project will provide data necessary to quantitatively assess the role of Central Asian rangelands in the global carbon budget. A GIS model incorporating ecological and policy scenarios will be used to explore the regional impacts of various technical alternatives. The project will continue to be led by Principal Investigator, Dr. Emilio Laca of the University of

California, Davis. (See page 2 & 7 for more information on the project and related activities).

In East Africa, the *“Early Warning Systems for Monitoring Livestock Nutrition and Health for Food Security of Humans in East Africa”* project will continue development of an early warning system for livestock which provides the capability of detecting changes in livestock well-being well before they are usually detected. The system integrates a suite of technologies including NIRS fecal profiling, point-based biophysical models, satellite imagery and spatial characterization tools. During this second phase, the project will focus on capacity building and institutionalizing the monitoring technologies, analytical tools and information infrastructures at multiple levels of decision making within the region. The project will now be led by Principal Investigator, Dr. Jerry Stuth of Texas A&M University. Dr. Stuth was a co-PI on the project during Phase I. (See page 4 for information on recent LEWS workshops).

The *“Improving Pastoral Risk Management on East African Rangelands”* project builds on past work with a program of applied research and outreach with the goal of improving pastoral risk management using asset and income diversification,

enhancement of information flow and use, and improving access to external resources. During this phase, research will identify context-sensitive interventions at various socio-economic levels. Intervention concepts will be organized with respect to four cross-cutting systems including livestock marketing, rural finance, natural resource tenure and public service delivery. Outreach will focus on how to help development agents and policy makers deliver comprehensive packages of risk management interventions to beneficiaries. The project will continue to be led by Principal Investigator, Dr. Layne Coppock of Utah State University. (See page 3 for information on the project’s recent planning workshop).

In addition, three GL-CRSP projects will begin to wrap-up activities. The Child Nutrition Project in Kenya will conclude its intervention study and begin analysis of collected data. Data collection will be completed for anthropometry, food intake, morbidity, cognitive tests, activity, behavior and attendance. During the coming year, the project team will be analyzing the data to determine the role of animal source foods on the growth and cognitive development of East African children. The team will also elucidate and clarify the

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Pat Barnes-McConnell Honored

Retired Bean and Cowpea CRSP Director, Pat Barnes McConnell was recently honored by the CRSP Directors for almost 20 years of service with the CRSP. Dr. Barnes-McConnell was presented with a plaque by Dr. John Yohe, Director of the INTSORMIL CRSP and Chair of the CRSP Council. Dr. Barnes McConnell served as Co-Chair of the CRSP Council for the past several years.

The reception was held at Otter Creek, Oregon and coincided with separate meetings of the Global Livestock CRSP Program Administrative Council (PAC), CRSP Directors and NASULGC Commission on International Agriculture. The University of California Davis, home of the GL-CRSP Management Entity, hosted the evening.

In addition to honoring Dr. Barnes McConnell, the reception gave PAC members an opportunity to meet the other CRSP Directors and learn about their programs. All the CRSP Directors were in attendance, including the new Bean and Cowpea Director, Dr. Irv Widders. All of us at the GL-CRSP wish Pat a happy and relaxing retirement!



Photo by Hillary Egna

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micronutrient situation, particularly in regard to the extent and severity of vitamin A and iron deficiency and the extent to which malaria and high infection burden impact on micronutrient status. (See page 6 for more information on future plans of staff).

The Impact of Economic Reform on the Livestock Sector of Central Asia project's socio-economic studies concluded at the end of

this past fiscal year and the breeding component will be completed over the next year. The Integrated Modeling and Assessment System project in East Africa concluded GL-CRSP activities at the close of this past fiscal year.

During 2000/2001, the Global Livestock CRSP will issue two new Requests for Proposals. The theme of Livestock/Wildlife interaction in East

Africa is the focus of an RFP released on September 15, 2000. A small grant RFP will be issued on topics of importance in Central Asia. ❧❧

If you would like further information on the Global Livestock CRSP projects or upcoming RFPs, please contact the Management Entity, University of California - Davis, Davis, CA 95616, email: glcrsp@ucdavis.edu or visit our web site at <http://glcrsp.ucdavis.edu>.

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GL-CRSP Links Universities & Institutions Working in Central Asia

data. This work is currently under the leadership of Dr. Wolfgang Pittroff from UC Davis. Collaborators are Drs. Jim Oltjen and Richard Plant from UC Davis; Dr. Valerii Nikolayev from the Turkmenistan Desert Research Institute; and Dr. Bakhtiyor Mardonov from the Samarkand Division of the Uzbek Academy of Sciences.

ILRI supported activities

Rangeland condition

Preliminary work by the LDRCT project indicated that

most grazing is concentrated near villages where grazing lands are degraded. Areas more remote from villages may be underutilized because of transportation and watering constraints. This study will review and summarize information on range management, and forage and feed utilization. E.A. Laca conducted a training in August 2000 to demonstrate sampling methods. Sampling sites were selected in the North and South and transect sampling is being completed for both regions. Further information will be reported once soil, forage and statistical analyses are completed. This work is assisted

by V. Yurchenko and K.A. Akshalov of the Baraev Institute of Grain Farming in northern Kazakstan, I.I. Alimaev of the Institute of Feed and Pasture in southern Kazakstan, E.A Laca of UC Davis, and coordinated by N. Malmakov of the Sheep Breeding Institute. ☎

For more information on these projects, please contact Dr. Emilio Laca, Dept. of Agronomy and Range Science, University of California, Davis, CA 95616. Email: ealaca@ucdavis.edu. Or Mary Dalsin, Global Livestock CRSP, University of California, Davis, CA 95616. Email: mcarpenter@ucdavis.edu.

Ruminations

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This publication was made possible through support provided in part by US Universities, host country institutions and the Office of Agriculture and Food Security, Global Bureau, U.S. Agency for International Development, under Grant No. PCE-G-98-00036-00. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID.

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Glossary of Terms

A-AARNET	ASARECA Animal Agriculture Research Network
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
GIS	Geographic Information System
ICARDA	International Center for Agricultural Research in Dry Areas
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
LDRCT	Livestock Development & Rangeland Conservation Tools Project
LEWS	Livestock Early Warning System Project
NACAR	National Academic Centers for Agricultural Research
NASULGC	National Association of State Universities and Land Grant Colleges
NIRS	Near-Infrared Reflectance Spectroscopy
PAC	Program Administrative Council
PARIMA	Pastoral Risk Management Project
RFP	Request for Proposals
SDSU	South Dakota State University
UCD	University of California Davis
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USU	Utah State University