



GOLDEN STATE PLANT NEWS

U.S. Department of Agriculture, USDA Natural Resources Conservation Service, Lockeford Plant Materials Center August 1998

LUNCH WITH A RUSSIAN AND OTHER INTERNATIONAL PLANT MATERIALS ACTIVITIES

David A. Dyer, PMC Manager

You might wonder how having lunch with a Russian can help feed the world. It all started at the Soil and Water Conservation Society Cover Crops conference in Sacramento, March 1997. Over lunch, soil scientist Dr. Chingiz Alekperov told me about how he was in the process of moving from Russia to Israel to carry out desert research with Ben-Gurion University of the Negev. His new work included locating plant materials that could be used to control soil erosion in overgrazed upland areas in Israel. I sent him about fifteen soil conservation varieties and a large packet of information on PMC activities and studies.

In March 1998, I was contacted by Dr. Amnon Bustan who was also with Ben-Gurion University of the Negev. He was working for Dr. Dov Pasternak, who is a global expert in genetic engineering. Through Dr. Alekperov, they became aware of the salt

grass, *Distichlis spicata*, study and collections we had at the PMC. We welcomed Dr. Bustan to the PMC in June and helped him to review and make selections from our eighty collections and to make additional collections in the San Joaquin valley.

Their research goal is to come up with a plant suitable for the reclamation of saline, sulphate, anoxic coastal soils and inland saline soils. This will involve comparing different genotypes and phenotypes of salt grass and studying physiological mechanisms and morphological responses. They will also identify features that can be transferred from salt grass to other plants, (tomatoes, cotton and melons), by molecular biology or by classic genetic methods. Identifying and developing plants and hybrid species that thrive in salt water and salty soils will help to alleviate severe food shortages in developing countries.

The word has gotten out in Israel, and the PMC has received many requests for the two highway plant materials study reports done by George Edmunson in the 1970's and Ray Clary in the 1980's. These two high-quality plant materials reports have information about roadside erosion control, which is very useful in Israel.

Japan

Many of the Lockeford PMC varieties, (legumes and grasses) have been sent to Dr. Fujii, head of the Allelopathy Laboratory, National Institute of Agro-Environmental Sciences, Japan. Fujii is testing these varieties to identify the natural chemicals responsible for weed suppression.

India and Pakistan

A paper, *In Search of Brassica Germplasm in Saline Semi-arid and Arid Regions of India and Pakistan for Reclamation of Selenium Laden Soils in USA*, was published in the Journal of Soil and Water Conservation. This effort was a collaboration between the Lockeford PMC, Dr. Banuelos, USDA-ARS, Drs. Ahmad and Ismal from Pakistan and Dr. Raut from India. The PMC staff and ARS have selected one accession for maximum selenium uptake. The PMC has sent many PMC conservation varieties to Dr. Ismal in Pakistan for use in revegetation efforts.

Chile

Work continues with Chilean rangeland scientist, Dr. Fernando Squella, to evaluate PMC varieties for forage production. Doing a rush shipment and all the required paper work was a challenge because they e-mailed us in February asking for seed in March, (their

fall). Also, efforts continue with Dr. Banuelos, ARS, to evaluate boron tolerant species collected in the Atacama desert of northern Chile in 1995. On this trip, there were many positive interactions between the Chilean media and us regarding promoting NAFTA and technology transfer between both countries. PMC varieties were also sent to Carlos Crovetto, the father of soil and water conservation in Chile, for cover crop evaluations.

Global Activities Committee

Work continues with the Soil and Water Conservation Soci-

ety, Global Activities Committee. This committee was created for the purpose of mobilizing resources to help SWCS play a more active role in promoting the protection, enhancement, and wise use of soil, water, and related land uses beyond the boundaries of the U.S. and Canada.

On the Horizon

Upcoming projects include, urban conservation practices in China; seed collection and conservation practice review in Israel; agricultural development in Ukraine; and a South African cover crop data base.

Fall Field Plantings

Fall is not far away, and this is a good time to plan field plantings and request seed. We have many native grasses and conservation varieties in storage. Be sure to look at California Bulletin No. CA190-7-2, California Plant Materials Plan, which lists some of the plants and seed that are available. You are welcome to call us to check on seed availability and to get planting ideas.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.