

and was presented in absentia to our scientists. In their letter to Dr William D Dar, Director General, ICRISAT, announcing the award, Prof Zong Xuxiao, CLAN Coordinator, China, and Ms Yang Shiyong, Leader of the Legume Program, ICGR, GAAS, Guangxi Province, say "... we feel that the introduction of pigeonpea in China will help farmers in improving their quality of life. On behalf of our government, we thank ICRISAT for supporting this program. Congratulations to you and to your outstanding scientists".

## ICRISAT Pigeonpea Jumps Over the Himalayas

**Pigeonpea** (*Cajanus cajan* (L.) Millsp.) is an important legume component in the dryland agricultural production systems, mainly because of its ability to produce large amount of high quality biomass and protein-rich seeds. India is the largest producer of pigeonpea, accounting for over 80% of the world production. Other important pigeonpea growing countries are located in South America as well as in southern and eastern Africa. In Asia besides India, Nepal and Myanmar grow considerable acreage of pigeonpea. The newly bred ICRISAT varieties have taken pigeonpea crop into new areas. The latest example is the success of our varieties across the Himalayan range in China.

It was about 1500 years ago when some adventurous traders carried pigeonpea seeds from India to China. In China it is popularly known as "Mu Dou" or "San Ye Dou" or "Qian Nian Dou" or "Shu Huan Dou". The adoption of this crop failed in the country due to its long-duration, small seeds, low yield, and bitter taste. Still the crop managed to survive for centuries because the local people discovered the folk medicinal values of pigeonpea. In 1950s, the Chinese scientists successfully explored the possibility of rearing a beneficial insect (*Kerria lacca* Kerr.) for the production of lac, a commercial resin produced by larvae which is deposited along the main stem and branches. Although the cultivation of pigeonpea in China has ceased due to loss of international lac market, the landraces have been preserved in the backyards of the farmers and in the forest lands.

In 1997, the first set of newly developed ICRISAT pigeonpea varieties was sent to China. These varieties were found to have high adaptability in different agro-ecological zones of southern China. Besides high seed

yield potential, these varieties matured early, had resistance to diseases and contained good quality seeds suitable for dry and green (vegetable) purposes. Some genotypes were also found to have additional character of high biomass production.

Considering the performance of ICRISAT's genetic materials in 1997 and 1998, with respect to their adaptation in the dry and degraded soils and their ability to produce quality fodder, a team of Chinese scientists including Li Zhenghong, Lu Fuji, Li Kung, and Zhou Chaohong in Yunan Province decided to grow this crop for soil conservation and rehabilitation of degraded and eroded soils. A research and development program was organized by the Institute of Resources Insect of the Chinese Academy of Forestry in Kunming. The scientists at this institute, including Zhang Jianyun and Gu Yong, are also conducting experiments to find out alternate uses of pigeonpea seeds.

Guangxi Academy of Agricultural Sciences (GAAS) is cooperating with Chinese Academy of Agriculture Sciences (CAAS), has taken up the challenge of promoting pigeonpea in more than a dozen hilly counties. The agricultural land in these counties is poor due to frequent land slides and floods. Each year large areas are left fallow because a suitable crop which could grow in these harsh environments is not available. The trials conducted with ICRISAT pigeonpea materials have given a hope to green the barren lands of the province. The tender leaves and branches of young pigeonpea plants make a good fodder. The team of GAAS scientists consisting of Yang Shiyong, Li Yangrui, Wei Dakai, Chen Chengbin and other country workers have conducted successful grazing and stall-feeding trials. Both goats and cattle relish its fodder. A large seed production program of ICRISAT lines has been undertaken at the experimental farm of GAAS in Nanning.

Mr Zong Xuxiao, an Associate Professor at the Institute of Crop Germplasm Resources (ICGR) of the Chinese Academy of Agriculture Sciences (CAAS) in Beijing, and Coordinator of pigeonpea promotional activities with ICRISAT together with Mr Hu Jiapeng and Xie Jinsui, has also taken up the challenge of promoting pigeonpea cultivation in other provinces such as Jiangxi, Guizhou and Hainan. They are also visualizing a potential market of vegetable pigeonpea in Beijing.

To develop a long-term sustainable pigeonpea production program, the Chinese Government sought further support from ICRISAT for transferring scientific knowledge and new materials. ICRISAT quickly responded by sending three pigeonpea experts to China and by arranging a two-month long training program for four Chinese



scientists at ICRISAT. These scientists not only received training in various scientific fields but also were given opportunity to see how commercial pigeonpeas are grown, processed and marketed in India. About 1 t seed of ICRISAT variety ICPL 87119 is being sent to Nanning for conducting large-scale on-farm trials during 2000.

The active scientific partnership between ICRISAT and China has shown very encouraging results. Now pigeonpea crop can be seen growing on the road sides and slopy river banks (see figure above). We believe that a good beginning has been made and the ties between ICRISAT and China will be strengthened further. A search for financial assistance has begun to execute this endeavour for the noble cause of helping the dryland farmers of southern China.

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## Pigeonpea Day in South Africa

Pigeonpea *dhal*, locally called as '*oil dhal*', is a favorite *dhal* of Indian migrant community in South Africa. To meet their demand about 2000-2500 tonnes of *dhal* is imported each year. Since last few years researchers in South Africa are trying to promote pigeonpea in dry areas with technical support from ICRISAT. The initial adaptive trials were very successful. On 25-26 May, Mr Cherian Mathews and Mr Mark Anthony of Lowveld Research Unit, Department of Agriculture, Conservation and Environment, Nelspruit, organized a successful 'Pigeonpea



(L to R) Dr R B Jones (Pigeonpea Technology Exchange Specialist), ICRISAT-Kenya; Mr S Maluleka (Chief Director, Professional Services) DACE, Mpumalanga; Mr J E Volschenk (Chief Director, Regional Services) DACE, Mpumalanga; Dr K B Saxena (Senior Pigeonpea Breeder) ICRISAT-India; and Mr C Mathews (Specialist Scientist), DACE, Mpumalanga.



Dr K B Saxena with the pigeonpea interest group (farmers and extension officers) during a field visit to pigeonpea trial plot at Malekutu, 25 May 2000.