

TA COMPLETION REPORT

Division: SAAE

TA No. And Name TA 5719-REG: South Asia Vegetable Research Network (Phase II)			Amount Approved	
			\$600,000	
			Revised Amount	
			\$600,000	
Executing Agency Asian Vegetable Research and Development Center (AVRDC)		Source of Funding TASF	Amount Undisbursed \$242.15	Amount Utilized \$599,757.85
Date of Report			TA Completion Date	
Approval	Signing	Fielding of Consultant (s)	Original	Actual
10 Jan 1997	4 April 1997	NA	30 April 2000	31 July 2001
			Account Closing Date	
			Original	Actual
			30 April 2000	10 Jan 2002
Description				
Recognizing the value of good genetic material for vegetable production and the need to address problems of pests and diseases in the available vegetable varieties, the Asian Vegetable Research and Development Center (AVRDC), established a collaborative vegetable research network for South Asia ¹ in 1991, with the assistance of the Asian Development Bank (ADB). This network (SAVERNET 1) covered the countries of Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka and facilitated the identification and exchange of about 100 elite vegetable varieties, their evaluation for yield and disease resistance and selection of 18 superior varieties. The TA also supported the national programs in improving their infrastructure, in training their manpower, and accessing new information and ideas. On the completion of this TA, all six participating countries requested ADB for further support to consolidate institutional arrangements for the network and to continue the farmers' field trials. The second phase (SAVERNET II) was therefore designed to carry forward and consolidate the achievements of SAVERNET I and was supported by ADB with a grant of \$600,000 in January 1997.				
Objectives and Scope				
The overall objective of the TA was to strengthen the vegetable research output and the capability of national agriculture research systems. The specific objectives were to (i) evaluate the identified superior varieties of tomato, eggplant, chili and onion and develop technology packages for adoption by farmers; and (ii) consolidate research on seed production, bacterial wilt resistance, leaf curl and other viruses in select vegetables.				
The scope of the TA included two sub-networks, one focusing on: onfarm evaluation of high-yielding varieties of tomato, eggplant, chili and onion to determine optimum management and input requirements in farmers' fields; and the second focusing on: crop and pest management research including integrated management of fruit and vegetable borers. Other activities included: preparation of work plans and strategies, exchange of information and planting materials, technical training of researchers, and project management and coordination.				
Evaluation of Inputs				
AVRDC as the executing agency provided sound technical and administrative leadership to the network and satisfactorily implemented, coordinated, and monitored project activities. It supported the network through internationally and locally recruited scientists and made available its facilities and genetic materials to the network members. Annual planning meetings and workshops were organized as scheduled and progress reports prepared and submitted on time.				
The national partners from the six countries participated fully in the network activities and assigned their scientists and administrative staff for implementing and monitoring the field trials, and documenting the findings. They also continued to freely exchange seeds of different vegetable species and share information. The progress in some of the countries was initially a little slow, largely because of frequent movement of senior staff, but the problem was addressed and did not affect the overall project performance.				
ADB closely monitored and reviewed the project right from its inception in 1997 and fielded three review missions. Staff provided valuable guidance to AVRDC and the national agriculture research systems (NARSs) in formulating and reviewing their work plans and in resolving initial implementation problems; particularly relating to frequent personnel movement and slow initial disbursement. As a result, the decision to extend the project by one year was taken in early 1999 itself, thereby providing adequate time to AVRDC and the NARSs to reformulate their implementation plans and ensure timely compliance by all partners.				
Evaluation of Outputs				
The network facilitated a substantial exchange of germplasm among the participating countries and 157 varieties of 22 different vegetable species were shared over the project period and several successes recorded. Under the sub-				

¹ TA 5461-REG: South Asia Vegetable Research Network, for \$ 600,000, approved on 25 September 1991.

network 1: an Indian eggplant variety with improved characteristics (Nayantara) was released in Bangladesh and onfarm trials were conducted at nine locations; two chili varieties from Sri Lanka were evaluated in farmers' locations and released in Bangladesh and India (MI-2, KA-2), several improved tomato lines from AVRDC were introduced in Nepal, Sri Lanka, and Pakistan; and finally, the first cabbage variety which can produce seed was developed and released to farmers in India (Pusa Ageli) and seed production undertaken in Bangladesh.

Under the sub-network II, the focus was on integrated pest and disease management. An integrated pest management package to control diamondback moth in cabbage was disseminated and adopted by farmers all over India; 7 tomato and 12 eggplant lines were tested and identified as stable for Bacterial Wilt (BW) resistance and released in the region, and a large number of farm trials were laid out for assessing and addressing weed infestation and viruses in pepper, tomato, and chili.

In addition, considerable importance was given by AVRDC to building capacity in the NARSs and transferring technical knowledge to the scientists in new vegetable production technologies, and pest and disease management. Training courses were organized both in country and at AVRDC and over 100 scientists were given the opportunity to train at AVRDC. For technology dissemination to farmers, a two-fold strategy was successfully employed; field schools, and distribution of printed material in local languages. A final workshop was conducted in June 2000 in Bangkok, Thailand in which 45 scientists from the network countries and 16 AVRDC staff participated. In addition to taking stock of the project output, the participants deliberated and decided on the actions necessary for sustaining the network; the role that AVRDC should play in providing it technical and financial backstopping, avenues to be explored for sourcing funds for key activities, mechanisms for interaction and exchange of information among the network countries, etc.

Overall Assessment and Rating

The beginning was slow due to some administrative problems in the participating NARS and the Project had to be extended by a year. But despite this, the objectives were fully achieved and all envisaged activities completed. The region gained a cooperating framework and improved research infrastructure for supporting vegetable production, the NARS' scientists gained improved technical capacity and the farmers gained many new high-yielding and disease-resistant varieties of vegetables to improve their income levels. The positive outcome of this Project was also validated by a separate study undertaken by ADB in December 2000² to make an assessment of the impact of ADB support to agriculture research. The study included, among others, the two phases of SAVERNET and noted that the network had generated very positive outcomes, high internal rates of return (over 90%) and high levels of economic surplus (over \$500 million), which had accrued more to producers than the consumers. The Project is therefore rated as successful.

Major Lessons Learned

- (i) Financial accounting and management was a problem in each of the NARS and required considerable streamlining by AVRDC to ensure smooth fiscal management and timely flow of financial statements.
- (ii) Frequent transfers of staff in the NARS proved disruptive and got resolved when staff responsible for the project was earmarked by designation rather than name.
- (iii) Systems for getting permission for specific research staff to attend meetings/trainings are complex and time consuming. Sufficient time should therefore be built into the planning process (at least 3-4 months).
- (iv) Seed exchange continues to be a touchy issue and in order to ensure a smooth exchange, protocols need to be developed and memoranda of agreements entered into between participating countries.

Recommendations and Follow-Up Actions

- (i) SAVERNET has been in operation since 1992 and over this period, the countries have developed mutual trust and confidence. The members are sharing and freely exchanging information and planting materials; all of which has proved beneficial for the vegetable growers in the region. The network should therefore continue to operate and AVRDC, as the sponsoring agency, should continue to provide guidance and leadership to it. In the final meeting of the project steering committee in June 2001 and attended by all participating countries and AVRDC, a resolution was passed to this effect. It was also decided that AVRDC would seek and arrange funds for meetings and other collaborative activities. AVRDC should be strongly urged to follow this through and ADB should periodically monitor it.
- (ii) The consultative group system is beginning to consolidate its regional efforts and establishing priority areas for each institution. AVRDC should explore useful linkages for SAVERNET with other international agriculture research centers and the private sector and encourage extended partnerships so that the network can be technically and financially sustained.
- (iii) Considering the problems being encountered in exchange of seeds and germplasm in many projects, the Consultative Group on International Agriculture Research (CGIAR) should be urged to take the lead and commission a competent agency to develop appropriate and acceptable protocols as a matter of priority.

Prepared by Pratima Dayal Designation Project Economist

² SST: STU 2000-17: *Special Evaluation Study on the Policy Implementation and Impact of Agriculture and Natural Resources Research*. December 2000.