



## **DR. ANAND DINAKAR KARVE**

**Recipient of the Award for Application of Science and Technology for Rural Development - 2007**

Born: August 7, 1936

Educational qualifications: Bachelor of Science (Pune, India); Doctor of Science (Tuebingen, Germany)

Dr. Anand Karve has created an Institute, registered in the name of Appropriate Rural Technology Institute (ARTI), to conduct development and dissemination of new rural technologies.

Since 1964, Dr. Karve has continuously headed research organisations and conducted research projects. More than 50 research & development (R&D) projects were successfully conducted by him in his long career as a Professional Scientist. He was also instrumental in creating a co-operative business called Sahyadri Tantraseva Audyogik Sahakari Sanstha Ltd. with the sole aim of commercialising the technologies generated by ARTI. He was the Director of Nimbkar Agricultural Research Institute at Phaltan, District Satara, and Maharashtra during 1968-80 and, since then, has been associated with research activities for institutions in India and abroad.

Anand Karve has developed more than 25 innovative rural technologies such as New Nursery Techniques for propagating species by the simple method of rooted cuttings, where the cuttings are treated with a rooting hormone and kept under conditions of high atmospheric humidity in a low cost high humidity chamber. He also developed new items for the Nursery Business based on seedlings of seasonal crop species and has standardized the methods for sugarcane, cotton and pigeon pea. He also introduced low cost tissue culture using pressure cooker instead of autoclave, rain water instead of distilled water and jam jars instead of costly Pyrex or Borosil ware. He has successfully experimented with farming on permanent raised beds made of a mixture of sand and soil, laid on a plastic film. All the soil related limiting factors are eliminated. Thus, a major part of Dr. Karve's work has been in the field of agriculture and this includes research in plant breeding, agronomy, pest control, crop physiology, water management, seed technology, plant tissue culture, green house technology and postharvest technology, practice of biodegradation of bamboo, drip irrigation for tree plantations, a new method of organic farming and rural energy from agro waste.

These research projects include several crops, viz., sorghum, cotton, safflower, groundnut, sugarcane, sugarbeet, sesame, maize, vegetables and flowers. The development of new techniques and new designs for rural artisans with an eye on increasing the earning capacity of rural inhabitants and also reducing the drudgery of rural women were undertaken.

Dr. Karve has devised standardised cloning techniques for about 50 plant species having medicinal and non-timber forest products. He has devised a novel method of growing root drugs, a technology for producing char briquettes from light biomass, a technology for making bamboo non-biodegradable and using the same for constructing outdoor structures, a technique for using saline water for irrigation, use of domestic sewage for raising trees, etc. Practically, all these technologies are replicable.

Dr. Karve has conducted 450 user's training courses and 10 entrepreneurs' training courses and, since 1989, has covered more than 12000 villages training thousands of persons in the rural areas and now in the Rural Entrepreneurship Development Centre at Phaltan, District Satara, and Maharashtra. The trainees include rural inhabitants, students, teachers, rural artisans, representatives of voluntary agencies,

functionaries of co-operative industries and even Government servants. Since January 2003, a Women's Technology Park has also been started at this Centre.

The technologies developed by Anand Karve have given rise to a large number of rural businesses, which are generating crores of rupees in the rural areas of Maharashtra. The present energy crunch provides an opportunity to rural inhabitants to establish business converting agricultural waste into processed fuel, and to enhance their incomes.

As a result of the pioneering work conducted by Dr. Karve in the field of household energy, Appropriate Rural Technology Institute (ARTI), the organization headed by Dr. Karve, was invited in 2002 to work as a partner of the Asia Regional Cook stove Programme (ARECOP) and Members of ARTI have served as resource persons in training workshops held by ARECOP in Nepal, Philippines, Thailand, Indonesia and Vietnam. Following an invitation by the United States Environmental Protection Agency, Dr. Karve constructed a compact biogas plant in USA in February 2006. In April, 2007, he served as a resource person at a workshop on modern methods of charcoal making, held in Pak Chong (Thailand). He demonstrated the method of making char briquettes from agricultural waste.

In 2003, ARTI was selected by The Ministry of Human Resource Development, Government of India, to act as one of the centres for providing training in rural technologies to women's self-help groups. During the same year, ARTI was accorded the status of a Partner Organisation by The United States Environmental Protection Agency, Washington, D.C., and United States of America (USA). In January 2005, Dr. Karve was awarded a grant of US \$133,000 by the United Environmental Protection Agency, Washington, D.C. USA, to standardize and commercialise his latest technological innovation of a compact biogas system.

Dr. Karve in 1983, he received a Senior Research Fellowship by Alexander von Humboldt Foundation, Bonn, Germany. In 1994, he received Prof. B.D. Tilak Award and a Citation by Indian National Science Academy, for Application of Science and Technology for Rural Development. In 2002, he received the Ashden Award for Renewable Energy, instituted by the Ashden Trust and Whitley Awards Foundation, London, United Kingdom (UK) In 2006, he received the Ashden Award for sustainable energy from Ashden Trust, London. In 2007, he received the Certificate of Merit from United States Environmental Protection Agency for Innovation in Stoves Design.

