GREEN FARMING STRATEGIC VISION : 17

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Recent Advances in Agriculture and Horticulture

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Agriculture is a way of life for more than 60 per cent of Indian population. Our nation has to feed over 1.2 billion people, where per capita cultivable land is hardly about one hectare. Imbalanced nutrient supply through fertilizers and increasing deficiency of micro-nutrients is hampering the realization of good yields even under irrigated conditions. Sustainably high yields can be obtained through the application of manure, micro-biological cultures, customized mixtures and slow release forms of fertilizers. A holistic approach, spanning agricultural R&D, dissemination of technology and provision of agricultural inputs such as quality seed, fertilizers, pesticides and irrigation would help us in achieving even higher levels of productivity.

Agriculture remains vulnerable to vagaries of monsoon particularly in rainfed areas. Natural calamities such as drought and flood occur frequently. Climate change is likely to aggravate the risks of thermal stress, drought and flood and may considerably affect agricultural production through direct and indirect effects on crops, soils, livestock, fisheries and pests. Building climate resilience, therefore, is critical. Potential adaptation strategies to deal with the adverse impacts of climate change are developing cultivars tolerant to heat, moisture, and salinity stresses; modifying crop management practices; improving water management; adopting new farm practices such as resource-conserving technologies; crop diversification; farm mechanization, improving pest management; making available timely weather based advisories; Utilization of renewable energy resources; crop insurance; marketing; harnessing the indigenous technical knowledge of farmers and increase climate literacy of the farmers.

A higher level of purchasing power of the people is creating higher demand for fruits, vegetables and protein rich food items. We have to step up efforts for increasing production of fruits, vegetables, milk and other dairy products, egg, poultry, fish, meat, etc. The horticulture sector includes a wide range of crops such as fruits, vegetables, roots and tuber crops, flowers, aromatic and medicinal plants, spices and plantation crops, which facilitate diversification in agriculture. Area under fruits and vegetables is very less in Gujarat as compared to national level but the productivity of these crops is higher in Gujarat. The productivity of fruit crops in Gujarat is 20.7 t/ha against the national productivity of 11.7 t/ha. Also, the productivity of vegetables crops is 5.4% higher than the national productivity.

Growing horticulture crops is an ideal option to improve livelihood security, enhance employment generation, attain food and nutritional security and increase income through value addition. Supply of quality planting materials, production and productivity improvement programmes through area expansion and rejuvenation, promotion and dissemination of technology for horticulture crops suitable for different agro-climatic conditions, in addition to human resource development, creation of infrastructure for post-harvest management and marketing, can help in a big way.

We all are well aware that the fossil fuel based energy resources are deleting fast. Fortunately, the India is bestowed with ample solar and wind energy resources. Efforts of Government and non-government organizations too have started paying some dividends with the installation of solar and wind farms. However, more concerted efforts are needed to focus development and use of renewable energy sources and energy efficient devices for effective utilization of these natural resources.

***Dr. A.M. SHEKH** has earned his B.Sc. (Agri.) from Sardar Patel University, VV Nagar and M.Sc. (Agri.) and Ph.D. degrees from the erstwhile Gujarat Agricultural University, Sardar Krushinagar. He started his career as Demonstrator, the then Institute of Agriculture, Anand (1970 to1974) and Lecturer, BA College of Agriculture (BACA), erstwhile Gujarat Agricultural University, Anand from 1974 onwards and held positions like Assistant Professor, Associate Professor, Prof. & Head, Department of Agricultural Meteorology and Principal & Dean, BACA, Anand Agricultural University (AAU), Anand (From 1.1.2004). He was holding the charge of Director of Research & Dean, PG Studies of AAU from January 2009 to April 2010. Looking to his bright career and novel contribution in agricultural education and research, the Government of Gujarat has appointed him as the Vice-Chancellor of Anand Agricultural University from 15th April, 2011. He implemented many innovative ideas in education, research and extension and doubled the intake capacity in Agriculture, Veterinary, Dairy Science with opening three new colleges after taking the charge of Vice-Chancellor. He is the recipient of many international and national awards. Recently, he has been felicitated with "Life Time Achievement Award" in the area of Educational Planning & Administration by International Association of Educators for World Peace at 33rd World Environment Congress held at New Delhi during June5-6,2013. Also, the Anand Agricultural University has been awarded many awards in his leadership. Faculty and students earned many awards at National and International level. Nearly six patents have been registered and microbes and variety also were registered at national depository system under PPV and FR.