



# Integrated approach to meet the global challenges

Joseph Mathew

**I**ndia has already fallen in the stream of globalisation and has started reflecting its effect in almost all the facets of production especially in primary sector. This has broadly two dimensions – one being, in developed countries with its better technological backup and scientific resource integration, the cost of production can be reduced considerably. They can exploit the market of developing countries in early stages with less sale price. This will break the pillars of traditional smallholder systems leading to an economic collapse in rural sector. This will also leads to increasing dependency on developed countries in coming years and gradually our production systems with its low input nature will vanish and developing countries will become the market place for the products of developed countries. Once their monopoly is

*Dr. Joseph Mathew, MVSc, Ph.D.*  
Assistant professor,  
Centre for Pig production  
and Research,  
Kerala Agricultural University,  
Mannuthy, Thrissur.

established, there is every chance of increasing their sale price, thereby making the life of people in developing countries miserable. Another dimension, which is well accepted by the fixed income personnel during early stages is that, they may get the essential commodities at a cheaper rate as a result of globalisation. In this context since we are already in this stream, there is no meaning in struggling to swim against, but it is high time to

develop strategies to face these challenges. Since the primary sectors consisting mainly of agriculture and animal husbandry are the areas being crucially affected, we have to concentrate more in this sector.

In Kerala, smallholdings with an average cultivable land area of 10 to 20 cents characterize the production systems in primary sector. We have failed to utilize these limited resources optimally due to unawareness on its potentials.

Simulated studies conducted in research centers has indicated that effective resource integration and rotational farming can provide 100% requirement of vegetables, tubers and fruits of a three to four member family. The model was consisting of 10 cents of cultivable land, a piggery unit with six pigs, 0.25 cents of fishpond and a one-m<sup>3</sup> biogas plant. The input requirement of the system was practically nil except for the pig feed, which was mainly based on food wastes. The agriculture, fish and biogas units were functioning mainly on pig manure. The average human resource input (family labour) per day was four men hours, which can easily be obtained from the leisure time of a three to four member family.

The study results indicated that an intervention at the micro level in small holder production system by scientific and effective integration of all resources (including human resource) would reduce cost of production in primary sectors. Moreover it will increase self-reliance at family level, which in turn radiate to villages, state levels thereby fulfilling the dream of 'Grama Swaraj' of Gandhiji. But this needs better planning and management where scientists can contribute a lot. This system approach instead of present day compartmental developing programme can provide miraculous results in future which need a multi disciplinary action plan.