

## **Innovation and Technical Change**

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Innovation and Technical Change are two phrases that are in common use today. What is implied in common parlance however, falls within the ambit of the various interpretations that could be given to these terms.

An Innovation in any form is a technological change that ensures higher efficiency, or higher productivity, or superior quality, or any combination of these in a given transformation process. In the broader sense this end product could mean anything from a manufactured product to an environmental change or even to an institutional arrangement.

It has to be recognized that research and development are not prerequisites for generating innovations. On the other hand studies have shown that economic growth and productivity efficiency almost always includes a contribution from a technological change or an innovation. However, a distinction has also to be made between a technological change and what is known as a technical change. While technological change almost always implies the introduction of an innovation, a technical change is the development and rise of a new socio-economic order generally catalysed by an indigenous R and D output.

Over the past 50 years or so two major technical changes have been observed in Sri Lanka. Both of these have been in the agriculture sector. Of these the best known technical change occurred during the period 1960 – 1980, and is now commonly referred to as the Green Revolution. During this period, sustained R and D helped to increase the yield potential of rice from 2.5 tones per ha in 1957 to 7 tones per ha during 1970-1973 and to a phenomenal figure of around 10 tones per ha in 1980. In fact by 1980, over 65 percent of the land under paddy cultivation was with the new hybrid varieties developed during the period 1960 to 1978. As a result of these developments rice production increased almost to the level of self-sufficiency by 1980, contributing substantially to the socio-economic development of the country. This was indeed a major technical change. However, it must be pointed out that this development was not only due to R and D. There were many other contributory factors other than scientific research, which included the economic policy environment as well as the production incentives available in the country. It is due to the harmonious play of research, economic policy and production incentives that ultimately led to this technical change.

Finally, recent studies initiated at NSF have now provided preliminary evidence to the occurrence of a technical change in the rubber production and processing industry. This is evidently a manifestation in response to a threat to the natural rubber industry by synthetic rubber and a concomitant demand for rubber-based products within Sri Lanka.

## Seminar on Technology Education

### List of Participants

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34.	Mr RM Newton	"
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