

EDITORIAL FOREWORD

Reconciling Agriculture Productivity, Scientific Community and Policy Makers

Global COVID-19 pandemic situation has exposed weaknesses of global food security and food sovereignty among the global community. Poor reconciling between experts views and those of policy makers were highlighted in every corner of the world. Poor resource mobilization of the globalised agriculture and food system has been evident in many areas other than few developed nations. Pandemic battered nations were concentrated more towards the vaccination war besides food security threats. During the early days of Agriculture, most of its work was concentrated based on interaction with nature and its behavior. World population is expected to rise to nearly 9 billion by 2050. According to the Food and Agriculture Organization (FAO) of United Nations (UN), the conventional theories may not be effective for feeding rising human as well as animal populations. Trade war between affluent nations and geopolitical concerns are becoming paramount important for shaping economies of the small nations like Sri Lanka. Therefore, reconciling agriculture productivity alone becomes a nightmare as it was well bound to scientists as well as policy makers. Science is the greatest collective endeavour to follow. Science aims to explain and understand while science is to understand the ultimate reality. Despite short history of modern science, its implications on every human engagement, generation of stream of knowledge and linking to greater and significant impact for daily life of average human being are evident. Two major paradigms in science are known as basic science and applied sciences. Basic sciences are also known as natural science (pure science) that can be defined as a fundamental understanding of natural phenomena and the processes by which natural resources are transformed while applied sciences were identified as a discipline that is used to apply existing scientific knowledge to develop more practical applications, technology or inventions. As for the results of progress of science, the whole world has transformed towards a massive development providing a huge impact to the progress of mankind. Compared to the early eighteenth centenary, the global average life expectancy has more than doubled and is now above 72 years of age. Enhanced life expectancy that we are enjoying today is a direct impact of the development strategies implemented as results of medical sciences, veterinary sciences, agriculture and allied fields with scientific inputs from disciplines such as biology, physics, chemistry and sociology. Quality of life has improved with the ingestion of new technology such as electricity, telecommunications, and biotechnology tools in day today life. From Francis Bacon (1561-1628), Micheal Faraday (1791-1867), Nikola Tesla (1856-1943), Emmanuelle Charpentier (1968) and Jennifer Doudna(1964) to date have made tremendous efforts to bring the human life to the current shape. Einstein's (1879-1955) general theory of relativity has been extensively used by most of these innovative thinking phases and by highly creative individuals.

Concept of the organic agriculture is vibrating among the scientific community as well as policy makers in Sri Lanka since recently. Food security is an argument often used against agro-ecology, reports indicating that it is possible to feed the entire population of Europe by 2050 through a gradual agro-ecological transformation with integrating livestock farming, crops and forestry with a zero carbon emission target. In light of different consumer behavior and consumption trends in Asian subcontinent compared to European community, successful implementation of agro-ecological food production in Sri Lanka needs to access not only policy makers' point of view but also the scientific and anthropological view point. Therefore reconciling between agriculture productivity, views of both scientific as well as policy makers need to be aligned. At the global level, the UN report published in March 2011 also showed that in just 10 years, small-scale farmers could double food production in vulnerable regions using green production methods. Agro-ecology does not just have a technical agronomic dimension but also a social and territorial dimension. As

the COVID-19 crisis has exposed the weaknesses of our globalised agriculture and food system, food security and agro-ecology, which go hand in hand with the development of "place-based food systems", must enable world food sovereignty with its food supplies in the short term as well as in the long term by preserving our production factors such as soils, seed quality, water resources and biodiversity.

The ultimate objective of research funding in many countries, irrespective of public or private modes, is the betterment of mankind. It has to be understood that the process of finding secrets of nature cannot be sustainable, if the knowledge generated from all these innovations are not put into practice. Proficient application of basic sciences will result in applied sciences and erudite use of applied science knowledge will give rise to modern innovations. Both policy makers and Science administrators again, funded by the public administration system in countries like Sri Lanka, therefore, should realize the importance of both basic and applied sciences, where substantial efforts needed for problem solving and science commercialization to cater towards a greater economy. Link between scientist and policy makers can be simulating to cocktail. The cocktail is an amazing art drown in the shadow of alcohol. Scientists and policy makers can enjoy riding until both of them control the cocktail, the moment when you let the cocktail to control you, you be ended up with misfortune. If you are wise enough to taste alcohol with discipline, you will really enjoy the hidden secret behind the intoxications. Therefore, greater understanding between scientists and policy makers is to be built up allowing research to go beyond intellectual satisfaction of the learnt academics and to have a positive impact on working class and general public.

Many countries those classified as developed nations may find solutions to most of their problems through the use of science and technology. The same model can be implemented for the developing nations such as Sri Lanka. Such endeavors could start with a carefully planned "science for all" concept rather than an individualized manner. The knowledge that will be generated through a scientific process with multilateral dialogue will cleverly utilize for building up quality life of the people. The understanding of this bi-directional symbiotic relationship between the scientific community and policy makers may only be a pathway to development, retrospectively, the country and its people will be blessed with a brighter future. To encourage scientists and policy makers to work together, understanding emotional intelligence, providing new incentives, using knowledge brokers such as translational scientists, making organizational changes, defining research in a broader sense, re-defining the starting point for knowledge transfer, expanding the research accountability horizon and finally, acknowledging the complexity of policy making process would be best fitted solutions to reconciling agriculture productivity with scientific community and policy makers.

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