Water is the greatest gift of nature. But unfortunately fresh water has become a dwindling resource globally as a result of population growth, increasing pollution caused by industrialization, poor water management practices, and climatic variations. Despite increasingly efficient water use in many developed countries, the demand for fresh water is ever on the rise. According to some recent reports, in 2025 two thirds of the world’s population will be suffering moderate to high water stress and about half of the population will face real constraint in their water supply.

In many regions, as freshwater sources become scarcer, wastewater use has become a plausible option for conserving and expanding available water supplies. Wastewater utilization is an important aspect of water resource and environment management policies, ensuring reliable alternative water resources, reducing environmental pollution and achieving a more sustainable form of development. Wastewater use in agriculture is by far the most established application, and the one with the longest tradition. There are agronomic and economic benefits of wastewater use in agriculture.

India is the fourth largest producer of natural rubber and at the same time the second largest consumer. The state of Kerala accounts for 90% of natural rubber latex production and the major part being the contribution of Kottayam district, called the Land of latex. There are a number of large, medium and small scale rubber industries and Rubber Processing Units established here, which produce a huge quantity of waste water or rubber latex effluent. With the exponential increase in the number of rubber industries, there has been a substantial increase in the generation of
wastewater, which is discharged either into open land or nearby aquatic ecosystems. This activity promotes varying degree of pollution load in water, soil and air.

Since the production of rubber latex effluent is a continuous process, it can cater for substantial irrigation requirements. This alternative use of wastewater will not only prevent the waste from becoming an environmental hazard but also will serve as a potential source of fertilizer if used rationally and at appropriate concentration. The research studies conducted earlier shows that the effect of an industrial effluent varies from crop to crop. Therefore a detailed systematic study related to the rubber factory effluent characteristics and its irrigation potential and utilization for crops is the need of the hour.

In this context, the present work "Utilization of latex centrifugation factory effluent and its effect on the growth of selected crop plants" has been undertaken to assess the effect of rubber factory effluent on morphological, physiological and biochemical content and yield characteristics of *Abelmoschus esculentus* and *Vigna unguiculata*. The thesis has been divided into five chapters. The introductory chapter describes the relevance of the work undertaken and the review of literature. In the second chapter the materials and methods adopted for conducting the study are given. The results and observations of the experiments conducted with different concentrations of the effluent on crops are given in the third chapter. In the fourth chapter, the results of the present work are discussed with the help of previous literature. Chapter 5 comprises summary and conclusion. The major findings of this work are summarized here with a short conclusion. Literature collected for this study is included at the end.