

## **Impact of Climate Change on Dairy Industry in Kurunegala District (A Case Study)**

**W. G. K. Weerasooriya<sup>1</sup>, B. S. A. K. Rathnayake<sup>2</sup>**

<sup>1</sup>*Lak Agro Pvt. Ltd., Imbulgoda, Sri Lanka*

<sup>2</sup>*Department Agricultural Extension, Faculty of Agriculture, University of Peradeniya, Peradeniya 20400, Sri Lanka*

*\*geeth13kalthari@gmail.com*

Agricultural systems are increasingly being affected by adverse impacts of climate change. Impacts of Climate Change directly cause low dairy milk production. Accurate perception and adaptations of rainfall and temperature changes are inevitable challenges to dairy industry. A case study was carried out in *Kuliyapitiya West* and *Bingiriya* Divisional Secretariat Divisions (DSD) in *Kurunegala* district to find out the trends of rainfall and temperature changes. Also the perceptions and level of adaptation of climate smart technologies used by the dairy farmers in the selected area were investigated. *Kuliyapitiya West* and *Bingiriya* DSDs coming under Low country Intermediate Zone was purposively selected and 60 dairy farmers were selected using stratified random sampling for the survey. Meteorological data for 34 years for Kurunegala District was used for the analyses. Results showed that there is a significant ( $p<0.05$ ) increasing trend in minimum mean annual temperature. A slight increasing trend in maximum mean annual temperature and the consecutive dry days were observed. A slight increasing trend in maximum mean annual temperature and the consecutive dry days were also observed. Dairy farmers' perception about daytime and night time temperature and distribution of rainfall were different with actual changes. There was a significant relationship ( $p<0.05$ ) between overall knowledge on climate smart technologies and dairy farm productivity. There was also a significant relationship ( $p<0.05$ ) between the highly important climate smart adaptation practices and dairy farm productivity. It is important to developing strategies to communicate the actual changes and trends in climate to increase the awareness and change attitudes of farmers on the importance of adapting climate smart dairy technologies.

**Key words** - Climate change, Climate smart technology, Dairy industry, Perception