

Investigating plant and soil response to variable clipping heights on agricultural hay fields

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Agriculture is an important contributor to British Columbia's economy, with nearly 349,000 hectares of land throughout the province being utilized to produce hay crops. With the growing concern of climate change, there is increasing pressure on the agricultural industry to change its management techniques to become more environmentally sustainable while still maintaining production of quality crop yields. This study will investigate how cutting forage species to different stubble heights will affect forage production and soil mineral and microbial content. Mowing is a common practice in agricultural fields that causes tissue damage to plants. In response, plants exhibit a compensatory growth mechanism, stimulating new growth. Mowing can be used as a management technique to alter crop height and density, affecting biomass production, species composition, and soil characteristics. Using this practice, agricultural fields can be managed to support higher forage production. This ultimately increases the ability of the soil to sequester atmospheric carbon, turning the landscape into a carbon sink. The objective of this study is to determine the most suitable clipping height for optimum forage production, soil health, and carbon sequestration. This research aims to improve agricultural management practices, benefiting both the environment and the producers.