White clover (Trifolium repens L.) is a principal legume in temperate pastoral systems that produces high quality forage and fixes atmospheric nitrogen into plant available forms through bacterial (Rhizobium) symbiosis. At AgResearch in New Zealand there is a long history in clover and perennial ryegrass (Lolium perenne) cultivar development which has been augmented in recent years with the development of substantial genomic and genetic resources. This is now being further progressed by implementing Genomic Selection strategies to improve breeding efficiency in this outbred forage species.

This seminar will provide an overview of major white clover programmes including development, implementation and recent results of Genomic Selection for a range of simple to complex traits such as cyanogenesis, dry matter yield, and Rhizobium symbiosis for enhanced biological N-fixation.