#10 Pellet Freezing Sheep Milk as transport and storage option; a project outline

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This presentation gives an outline of a research and development project currently being conducted at Massey University. The project aims to develop an apparatus, suitable for on-farm use, that will rapidly and continuously freeze raw sheep’s milk as a ‘hail’ of droplets with a diameter of approximately 3mm. Smaller farms may not produce sufficient volumes of milk, and may be too remote, to allow processors to economically collect raw chilled milk on a daily basis. Increasing the number of producers able to supply processors is key to growing the NZ dairy sheep industry and increasing export revenue from the industry. Rapid freezing of milk is a method that allows the several milking’s product to be aggregated and stored while maintaining the quality of fresh milk. As a continuous process, freezing milk in a ‘hail’, will simplify product handling, reduce storage space, and reduce handling steps. This research is being conducted by a PhD student and Post-Doc fellow within School of Food and Nutrition and the School of Engineering and Advanced Technology, with contributions and support from academic staff within the School of Food and Nutrition. Funding for this project is provided by the Ministry of Business, Innovation and Employment as part of the Food Industry Enabling Technologies program.