## **List of Contents**

		Page
Abstract – Resumen – Resum		1
General Introduction		9
Objectives		21
Experiment I	Description and function of a mobile open-circuit respirometry system to measure gas exchange for small ruminants	25
Experiment II	Low-cost mobile open-circuit hood system for measuring gas exchange in small ruminants: From manual to automatic recording	37
Experiment III	Energy partitioning and substrate oxidation by Guirra ewes fed soybean hulls and corn gluten feed blend as a replacement for barley grain	55
Experiment IV	Energy partitioning and substrate oxidation by Murciano-Granadina goats during mid lactation fed soybean hulls and corn gluten feed blend as a replacement for corn grain	73
Experiment V	Use of dry citrus pulp or soybean hulls as a replacement for corn grain in energy and nitrogen partitioning, methane emissions, and milk performance in lactating Murciano-Granadina goats	97
General Discussion		125
Conclusions		139
Implications		143
Acknowledgements		147
Curriculum Vitae		153