

## **Acknowledgments**

I began my pursuit of a Ph.D. with two goals in mind: (1) the improvement of optimal nutrition for grazing horses using research, and (2) an improvement of myself using thought, self-initiative and perseverance. I knew that one day I would complete this project, but I have many people to thank for helping me along the way.

My heartfelt thanks to my committee chair and mentor, Dr. David Kronfeld, for believing in me in the beginning and for guiding me through my studies by first providing the necessary knowledge and then the freedom to become an independent researcher. Dr. Larry Lawrence spent innumerable hours driving between Blacksburg and the MARE Center in order to take radiographs of horses that were often less than willing. Dr. Nancy Jack gave me the opportunity to teach (students and horses) and reminded me to use exactly the necessary stimulus to achieve the desired response. Dr. David Sklan never ceased to amaze me with his patience and support through e-mail and visits from Israel: he sent statistical assistance, humor and wise advice which helped keep my feet on the ground. Dr. Joe Herbein effortlessly provided my foundation of nutrient metabolism, and his assistance with the mares' milk project was crucial. Dr. Terry Swecker often helped me put everything into perspective: the serious scientific business versus the unserious, and I appreciate his editing skills. Dr. Jim Bowen was ready to help whenever I asked, often on short notice, providing computer equipment, classic literature and a broad scope of knowledge.

The John Lee Pratt Graduate Fellowship Program in Animal Nutrition provided the opportunity for me to achieve my goals at Virginia Tech. Mr. Paul Mellon, of Upperville, Virginia, donated the land and funds to support the existence of the MARE Center. The WALTHAM Centre for Equine Nutrition and Care, c/o Melton Mowbray, England, has provided continued support of the MARE Center. I am exceedingly grateful for these supporters.

My research could not have been completed without the assistance and encouragement from the MARE Center staff. Dr. Wendell Cooper saw hidden potential in old buildings and kept everything in its best light. He also taught me much by example about horse management and practical principles that are not easily learned in books. Bobbie, you were and always will be the greatest...you kept all of the paperwork moving like clockwork, and even in your most busy moments had a minute for me. Alvin, Bill and Scotty, I won't forget the innumerable feed runs and horses caught (willingly and otherwise); thanks for all of the laughs, the bruises you bore, and for listening to my silly jokes.

I am indebted to Louisa Gay, who helped me throughout my research with her technical assistance in the laboratory; I also appreciate her approval and constructive criticism of my work. I would have been lost without the technical abilities of Lee Johnson for computer help and radioimmunoassay assistance, Michelle Weisbarth for help with the milk fat methylations and GC analysis, and Ted Ellmore for the hydrolyzable carbohydrate assays.

To my fellow equine students, I hope we have many good times yet to come. Janice, we were roomies long enough to understand each other's needs without words, and I will never forget that morning that you helped me, milking mares in the pouring rain. Judy, Lynn, Pam and Shea, you set great examples for me to follow. Kristen, you always had a place for me to stay whenever I needed it, and the perfect buddy for my Border Collie. Kelly and Patty, I enjoyed all of the conversations at work and over dinner. Amy, Burt, Tiffany and Belinda, you have reminded me of how I felt when I was beginning graduate school; may I remember this when I have students in the future. And to my other friends, thanks for the girls' nights out, the late nights studying, for helping me move, but especially to Martha and Chris, who gave me a place in their home when I was in transition and nearly homeless...thanks is hardly enough.

Ed, you wanted to be a part of this: I'm glad you're my best friend. You have been wonderfully supportive, enabling me to be myself. Thanks especially for reminding me to take a break and play. Jeff, thanks for all of the late night conversations and the pep talks, for telling it like it is, and for being all of the things that only a brother can be.

Last, but certainly not least, I would like to express my love and appreciation for my parents, Mark and Leone Hoffman, who fostered a learning environment as I was growing up. "Let's look it up..." was a common answer to many of my questions. They taught me to set high goals, allowed me to pursue my dreams and gave me the confidence and ability to achieve anything.