

ACKNOWLEDGMENTS

It has been an honor and pleasure to know and to work with the good people in both Blacksburg and Painter. The friendships and experiences gained from these people have taught me many things that I truly will never forget. It has been a real pleasure working with Dr. Henry Wilson and I would like to thank him for his insightful guidance, support, and dedication throughout this project and for this I am truly grateful. Thanks to Dr. Jim Westwood for his guidance and providing me with an enjoyable and rewarding laboratory experience. I would also like to thank Drs. Craig Nessler, Scott Hagood, and Dan Brann for giving me insight and advice and for serving on my graduate committee. It has been a pleasure to know and work with Tommy Hines, who has been a great support and friend throughout these years. I truly appreciate the technical support and friendship from Dr. Nourredine Hamamouch, who was always willing to answer my questions and help me with research in the Westwood lab. I would also like to thank the group from the Nessler lab, including Dr. Argelia Lorence, Michelle Raymond, and Amy Vance for providing technical information and materials related to my laboratory research projects. I thank my fellow graduate students for their help and friendship, including: Dr. Greg Armel, Dr. Steve King, Dr. Rob Richardson, Dr. Kevin Bradley, Dr. Andy Bailey, Dale Keahy, Jason Warren, Brian Trader, Bryan Johnson, and Dr. Jason Sanders. I truly appreciate the encouragement and guidance I received from faculty and staff at the Eastern Shore AREC, especially Tommy Custis, Dr. Steve Phillips, and Dr. Tom Kuhar. Finally, I would like to thank the secretarial staff, Nancy Davis, Arleta Boyd, Judy Fielder, and Patsy Neice, for their help over the years.

Most importantly, I would like to thank my parents, sister, and grandparents for their support, encouragement, and for being my role models. And most of all, I would like to thank my wife Erin for her love, support, and sacrifices, and for keeping me motivated throughout the completion of these projects. Thank you all.