10. Acknowledgements

First and primarily, I wish to thank my doctoral advisor, Prof. Dr. A.E. Melchinger for his committed guidance and his creative scientific support in the course of the present investigation. Particularly, I am deeply indebted for his trust in me in terms of representing this thesis work on numerous national and international meetings and conferences.

I owe great gratitude to my scientific supervisor, Prof. Dr. Martin Bohn for his committed support within all stages of the work of this thesis. Symbolized by his never closed office door, he had time for my needs whenever I needed his advice. Especially, I highly appreciated the fruitful hints and discussions when I got stuck between endless datasets, countless maize plants or never-ending manuscript corrections.

My thanks are extended to Franz Mauch as well as to Dr. D. Klein and his team of the research station Eckartsweier for the skilled design, realization, and data collection of the field trials. In particular, I owe gratitude to Mr. E. Langmann, Dieter Wiebe, Roland Schoch, Sebastian Pluskat, Maria Wedemeyer, Thomas Schmid, and Adelbert Lehmann for their assistance with a maize field experiment that comprised more than 20% of all maize plots conducted at Eckartsweier over two years. Furthermore, I would like to thank the above-mentioned as well as all unmentioned workers of the research station Eckartsweier for the enjoyable working atmosphere and for their willingness to work overtime during work peaks.

My sincere thanks to Mrs. B. Boesig for being of great help in organizational matters and for being the constant within the everyday life of a plant breeding institute. I am also grateful for the helping hand of Mrs. S. Meyer in financial and itinerary issues.

Special thanks to Prof. Dr. H.F. Utz, Dr. Matthias Frisch, Thomas Magg, Renata Mihaljevic, Jasmina Muminovic, Hans Peter Maurer, Jochen Reif and all unmentioned members within our working group and beyond as well as my office mates Christina Dußle, Marcel Quint, Susanne Dreisigacker, and Pingzhi Zhang for creating a pleasant work environment in combination with the necessary fun during (sometimes extended) working hours and for their support in many scientific and non-scientific issues.

Moreover, I am obliged to our project partners for their essential contributions to studies of this thesis, namely Drs. Jeroen Rouppe van der Voort (Keygene N.V.) and Kader Fatmi (Celera) for their assistance with molecular data, Drs. James Reeves and Vince Lea (NIAB, Cambridge) for their skilled project management, Dr. R. Becher (Bundessortenamt) for his competent advice in terms of observation of morphological traits, and Dr. P. Görtz (Südwestsaat GbR) for the supply with field area at Scherzheim.

Last but foremost, I am deeply indebted to my family, namely Walter, Sofie, and Matthias Heckenberger, my girlfriend Katrin, as well as my friends who supported me in manifold ways, reminded me with great insistence of necessary breaks and rest periods, helped me to keep myself "down-to-earth", and gave me the feeling that there may be certain things that are, in terms of "personal sustainability", at least as important as this thesis.

This research was part of the project "Molecular and other markers for establishing essential derivation in crop plants" supported by a grant from the European Union, Grant No. QLK-CT-1999-01499 (MMEDV). Parts of this research were funded by the 'Gesell-schaft zur Förderung der privaten Pflanzenzüchtung' (GFP), Germany as part of the project "Entwicklung von Kriterien zur Definition und Feststellung von abgeleiteten Sorten mittels molekularer Marker", Grant No. A 29/98 HS (97 HS 027).