RECENT PROJECTIONS show that in the next 40 years, the world will need nearly twice as much food as we currently produce to feed a population expected to top 9 billion by 2050. We have made important strides in increasing food availability over the past century, and producing even more will be an enormous challenge. That’s where this book comes in. At the University of Minnesota we have a long history of developing new varieties of many crops that address needs for higher yields, disease and pest resistance, and hardiness for our unforgiving climate. The 2011 variety trials catalogued in this booklet reflect the latest research on a wide array of crops and needs, with an eye toward the future.

For several years now, the university’s slogan has been “Driven to Discover.” That’s what we do in agronomic crops research: we discover new varieties that help Minnesota’s farmers feed the world. Our land-grant mission carries with it the responsibility not just to discover, but also to share those discoveries with our agricultural stakeholders and to teach both current producers and the next generation of scientists how to move toward even greater advancements.

We don’t do this work alone, of course. This variety trials report is a testament to how producers and researchers can cooperate to reach shared goals. Without the cooperation of growers in these trials, this booklet would be sadly incomplete. We also owe thanks to our state and federal government, where leaders recognize the importance of research that helps people thrive both locally and globally.

We are lucky to live in an age when new tools and techniques allow us to make eye-popping discoveries about the plants that provide much of our food. While the tools and techniques may have changed, our mission remains the same as it was when the university began these variety trials in the late 19th century: helping farmers produce more food safely and sustainably. Even though the world will need so much more food, our scientists and Minnesota’s food and agricultural producers are up to the challenge.

Director, Minnesota Agricultural Experiment Station, and Dean, College of Food, Agricultural and Natural Resource Sciences