"DISCOVERY ILLUMINATES EVERYONE," the University of Minnesota’s current advertising campaign says, and nowhere is that more true than in the Minnesota Agricultural Experiment Station’s annual field crop trials.

Agronomists at the university research and discover new varieties that help Minnesota’s farmers feed the world, but we don’t do it alone. The field crop trials and this yearly report created from their findings provide a perfect example of how producers and researchers can cooperate to reach shared goals. Without growers’ cooperation, those trials and this report would be missing important data and analysis.

Together, 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 2012 trials catalogued in this booklet reflect the latest research on a wide array of crops and needs, with an eye toward the future needs of an expanding and hungrier population.

Each year since 1920, this book has reflected how new tools and techniques are changing the way producers grow crops. This year, we’re also introducing a new technology in how we report these discoveries: For the first time, we are putting the field data into an online searchable database, to see if this new way of sorting and comparing crop entries provides some additional help as you make planting decisions. The database is still in its test stages, but please take a look at www.maes.umn.edu and tell us what you think. And don’t worry: we will continue to publish results in this printed format as long as Minnesota growers find it useful.

We live in an age of amazing scientific discoveries, but unless they are shared with everyone, discoveries lose their value. I hope you find this booklet – and the database – illuminating.

Allen Levine

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

College of Food, Agricultural and Natural Resource Sciences

University of Minnesota
Minnesota
FIELD CROPS TRIALS RESULTS

To help growers select crop brands and varieties best adapted to a specific area the Minnesota Agricultural Experiment Station (MAES) compares entries in research plots at St. Paul, Becker, Crookston, Grand Rapids, Lamberton, Morris, Rosemount and Waseca, and in farmers’ fields. Entries are grown in replicated plots at each location; factors affecting their yield and characteristics are as nearly the same as possible for all entries at each location.

Not all crop entries included in previous editions of Minnesota Varietal Trials, predecessor to this publication, are included in this issue. If you have a question about such a crop, contact the author(s) of the related crop section at 612-625-2740, or go to www.maes.umn.edu, the MAES web site. Click on Commodity/Crop Lines, then on Varietal Trials, which will display a crop listing.

Certified Seed

While use of certified seed is suggested, certification in itself does not imply recommendation. Registered and certified seed of many crop varieties among the entries in this report can be purchased from seed dealers or grower-members of the Minnesota Crop Improvement Association (MCIA). You can find sources of certified and registered seed at the MCIA web site, www.mcia.org.

Interpreting the Tables

The LSD (least significant difference) numbers beneath yield columns in tables are statistical measures of variability within trials. The LSD is used to determine whether the difference between two yields is due to a genetic difference in the entries or to other causes, such as environmental variability.

If the yield difference between two entries equals or exceeds the LSD value for the yield column, the higher-yielding entry probably was superior in yield. If the difference is less than the LSD the yield difference probably was due to environmental factors. An “NS” notation in a column indicates no significant difference for that characteristic.

The relative maturities of entries are variously indicated in the tables as date of maturity; date of heading or blooming; days to maturity, heading or blooming; or moisture percentage at harvest.

These trials are not designed for crop (species) comparisons; crops are grown on different fields and with different management. The data should be used only to compare varieties within a table.

Abbreviations

To save space in listings, “agricultural experiment station” often is abbreviated as AES, and “e.g.” is sometimes used as “for example.”

Publication Staff and Information

Coordination: Jennifer Obst
Supervisor: Leland L. Hardman
Photography: Dave Hansen

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