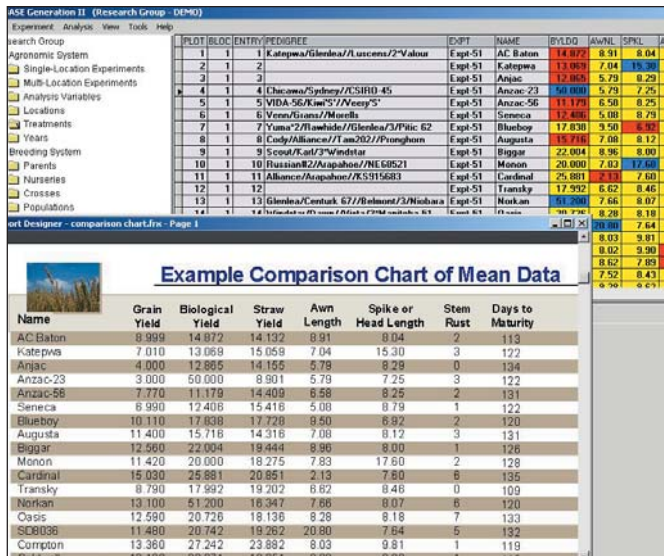


Doing the Numbers

Management and analysis software creates information from plot data



Trial setup and relational database capabilities are new features of AGROBASE Generation II data management and analysis software favored by researchers at Fielder's Choice Direct, a division of Landec Ag, Inc. and Golden Harvest Seeds.

Planting thousands and thousands of replicated test plots is not such a big job. Plot planters with electronic controls have made planting a relatively simple task.

A bigger job is to manage all the information and data points associated with each plot. The biggest job, however, is to extract useful, meaningful information from the millions of datum generated by an extensive variety evaluation program.

This is not just a challenge for plant breeders. Even a moderate-sized variety evaluation program can generate large amounts of data when weather, soil and growing condition information is added to the specific variety information.

"I have been involved with field evaluations for over 25 years," says Dick Bohling, Manager, Agronomic Services, Fielder's Choice Direct, a division of Landec Ag, Inc. "The size and complexity of field evaluation programs is constantly increasing. It is a cycle: increased data demands more sophisticated evaluation tools which enable us to include more data in our evaluations."

Obtaining statistically valid research requires that the evaluation program be properly designed prior to planting. "Designing the field program is critical," says Scott Furbeck, Research Director for Golden Seed Co. LLC, a business unit of Golden Harvest Seeds.

"You want our program to be as efficient as possible. Without a careful design, you may be unable to make the post-harvest comparisons you need to effectively move your breeding program or variety selection program forward," says Furbeck.

CASE STUDY

Data Evaluation

To design their test programs and evaluate plot data, both Bohling and Furbeck use the AGROBASE Generation II data management and analysis system developed by **Agronomix Software, Inc.**, Winnipeg, MB (204-487-4245/www.agronomix.mb.ca).

"In the beginning of the season, we use AGROBASE to design our test program," Bohling says. "We enter into the program the entries we want, the locations, how many reps and it takes care of setup including printing the seed packet labels."

At the end of the season, Bohling likes to make head-to-head comparisons. Missing plot data is frequently encountered in evaluation programs. "It takes care of missing data," says Bohling. "I have to trust the statistician who programmed AGROBASE. What this software does requires some sophisticated methods."

Analytical Advancements

"The relational database in Generation II improved things dramatically," says Furbeck. "It is light-years ahead of the old program. A knowledge of FoxPro was needed to operate the older version. Now all you need is a little time to setup your reports. It is a powerful and flexible analytical tool."

Furbeck says he has seen some companies literally spend millions of dollars to develop their own proprietary data management programs that deliver less floatability than AGROBASE.

"With AGROBASE, I write a trial and never have to worry about saving tables," Furbeck says. "Even if I never used it for analysis, it is indispensable for trial setup."

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