

MICROWAVE TESTS 2007

The Microwave tests were done to provide some preliminary data on new and existing hybrids. We hope this data will provide some beneficial information to our customers. We recommend that if you are interested in any of our hybrids for microwave use, you hold the hybrid to your own test standards. We will provide you with samples of any of the hybrids upon request.

Microwave Test Variables

Most hybrids were tested eight times. Some hybrids were tested fewer times due to the availability of seed. Out of the eight entries there were 4 pairs. Each pair contains duplicate entries from the same research plot. Therefore a hybrid with eight entries has four pairs of samples from four different research plots. Subjecting the hybrid to this type of test allowed us to see the consistency and range of a hybrid in the microwave from different growing conditions and regions throughout the year.

With every repetition we used 65grams of popcorn and 40grams of peanut oil, measured with a digital scale to the tenth of a gram. We subjected every repetition to 1 minute and 40 seconds of popping time. The average consumers microwave popcorn button time varies from company to company and model to model. The popping time of 1 minute 40 seconds represents the shortest amount of time available for popping on the market. Using this time limit sets a standard. The standard is to see whether a hybrid has the ability to have a low amount of unpopped popcorn kernels (upk) in a consumer microwave with the minimum popping time. The microwave used was a Sharp 1000 Watt/R-21 HT commercial microwave. After popping, the sample was run over a 20/60mm screen and then measured in a 4000mm graduated cylinder. The sample was then subjected to tasting evaluation of Tenderness (1= tough as cardboard, 5= perfect no toughness) and Hulls (1= lots of hulls, 5= no hulls). The unpopped kernels were weighed on a digital scale to one tenth of a gram. The samples kernel count per 10 grams and pop (mwvt) in oil were included. The high (upk) and low (upk) range is provided to show the consistency of a hybrid among all entries.

Results

Using the average of all eight entries, 8156 had the lowest (upk) and the lowest range between its high and low (upk). 8156, 1160, and 11850 all had very high expansion rates, averaging around 3350 for all eight entries. 8156 had the best range between its high and low expansion rates of 250mm. Looking at all values 8156, 1160, 42820, 15820, and 11850 would give favorable results in the microwave.