

2022 Spring Emmer Variety Trial



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2022 SPRING EMMER VARIETY TRIAL

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Emmer (*Triticum dicoccon*) is an ancient two-rowed hulled wheat, also known as farro. Emmer was domesticated in the Fertile Crescent and was widely cultivated in the ancient world, but has since been replaced with higher yielding modern wheat varieties. Emmer is high in protein and as the ancestor of durum wheat, may be a suitable grain for producing pasta and flatbreads. There is an increasing consumer interest in locally grown grain for human consumption

On 5-Aug, plant measurements of heights and lodging were taken prior to harvest. Lodging was assessed using a visual rating of 0 (no lodging) to 100 (complete lodging). Plots were harvested on 5-Aug with an Almaco SPC50 plot combine. The emmer grain was dehulled with a Trumpet Abrasion Dehuller. Following dehulling, test weight was taken on the dehulled emmer grain and an approximate one-pound grain sample per plot was collected for quality analysis. Grain quality was determined at the E. E. Cummings Crop Testing Laboratory at the University of Vermont (Burlington, Vermont). Samples were ground using the Perten LM3100 Laboratory Mill. Flour was analyzed for protein content using the Perten Inframatic 8600 Flour Analyzer. Falling number was measured (AACC Method 56-81B, AACC Intl., 2000) on the Perten FN 1500 Falling Number Machine. Deoxynivalenol (DON), a vomitoxin, was analyzed using Veratox DON 2/3 Quantitative test from the NEOGEN Corp. This test has a detection range of 0.5 to 5 ppm. Samples with DON values greater than 1 ppm are considered unsuitable for human consumption.

All data were analyzed using a mixed model analysis where replicates were considered random effects. The Least Significant Difference (LSD) procedure was used to separate cultivar means when the F-test was significant ($P < 0.10$). Variations in yield and quality can occur because of variations in genetics, soil, weather, and other growing conditions. Statistical analysis makes it possible to determine whether a difference among varieties is real or whether it might have occurred due to other variations in the field. At the bottom of each table a LSD value is presented for each variable (e.g. yield). LSD at the 10% level of probability are shown. Where the difference between two varieties within a column is equal to or greater than the LSD value at the bottom of the column, you can be sure in 9 out of 10 chances that there is a real difference between the two varieties. In the example, variety A is significantly different from

Just prior to harvest, heights, lodging, and heading date were measured (Table 4). The average height was 107 cm and ranged from 85.7 to 116 cm. ND Common was the tallest variety and was statistically similar

