

PERFORMANCE SEED TRIALS

TriCal Forage Variety Trial



PERFORMANCE
SEED

Demonstration of spring triticale varieties compared to commonly grown cereal crops:

- Gunner
- Flex 719
- Hybrid Surge
- Triple Crown Mix
- Diverse Mix
- Surge
- CS Camden oats
- CDC Austenson barley

Task	Timeline	Details
Seeding	June 6	85-153 lb/ac 1" depth
Maintenance	May 20 - June 26	Urea 100 lb/ac S15 80 lb/ac Glyphosate (pre-seed) 1 L/ac Bromoxynil 400 mL/ac
Harvest	Sept. 11	Forage harvester

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Legend: Surge Triticale = ST, Gunner Triticale = GT, Flex 719 Triticale = F 719 T, Hybrid Surge = HS, CS Camden Oat = CS CO, CDC Austenson Barley = CDC AB, Triple Crown Mix = TCM, Diverse Mix = TM

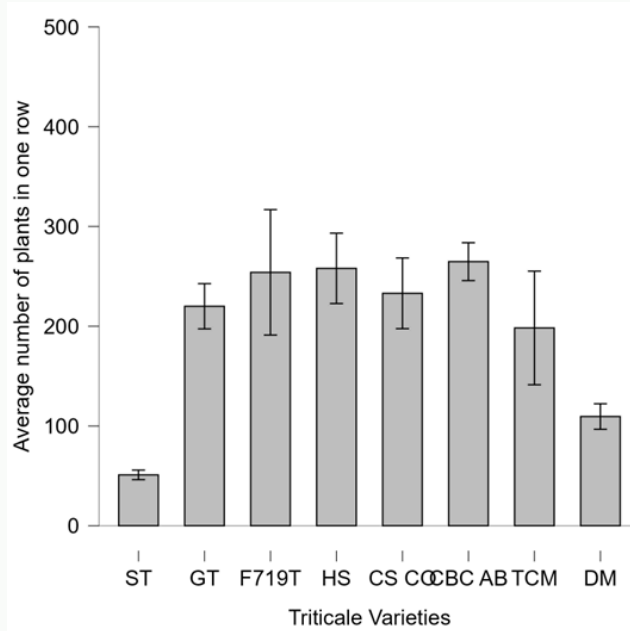


Figure 1. Emergence counts of triticale varieties and mixes 14 days after seeding

CDC Austenson barley had the highest emergence count ($p = 0.008$) followed by Hybrid Surge ($p = 0.011$), Flex 719 Triticale ($p = 0.031$) and CS Camden Oat ($p = 0.032$). Gunner Triticale and CDC Austenson barley both also had the highest densities ($p = 0.009$), followed by Flex 719 Triticale ($p = 0.015$), Hybrid Surge ($p = 0.020$) and Triple Crown Mix ($p = 0.026$) compared to Diverse Mix and control. At 50% heading, Triple Crown Mix has the shortest height (P value = $<.001$) which is significantly different compared to the others triticale varieties. At maturity, Triple Crown Mix (P value = $<.001$) still has the shortest height which is significantly different compared to the other triticale varieties and the control.

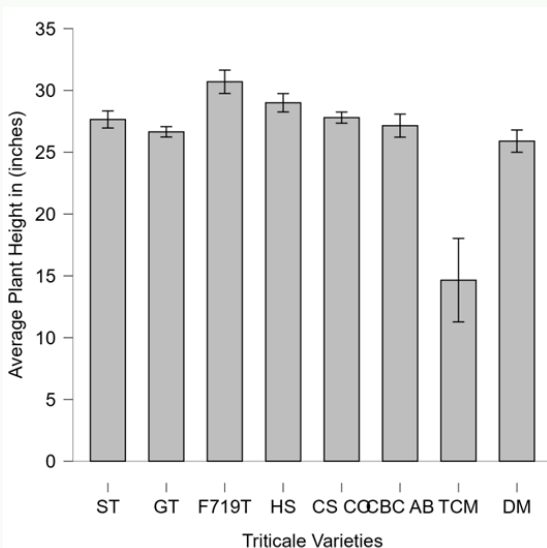


Figure 2. Plant height (inches) of varieties at 50% heading stage

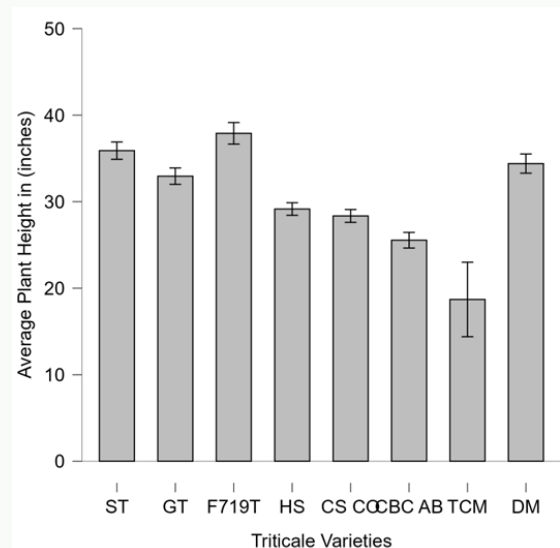


Figure 3. Plant height (inches) of varieties at maturity

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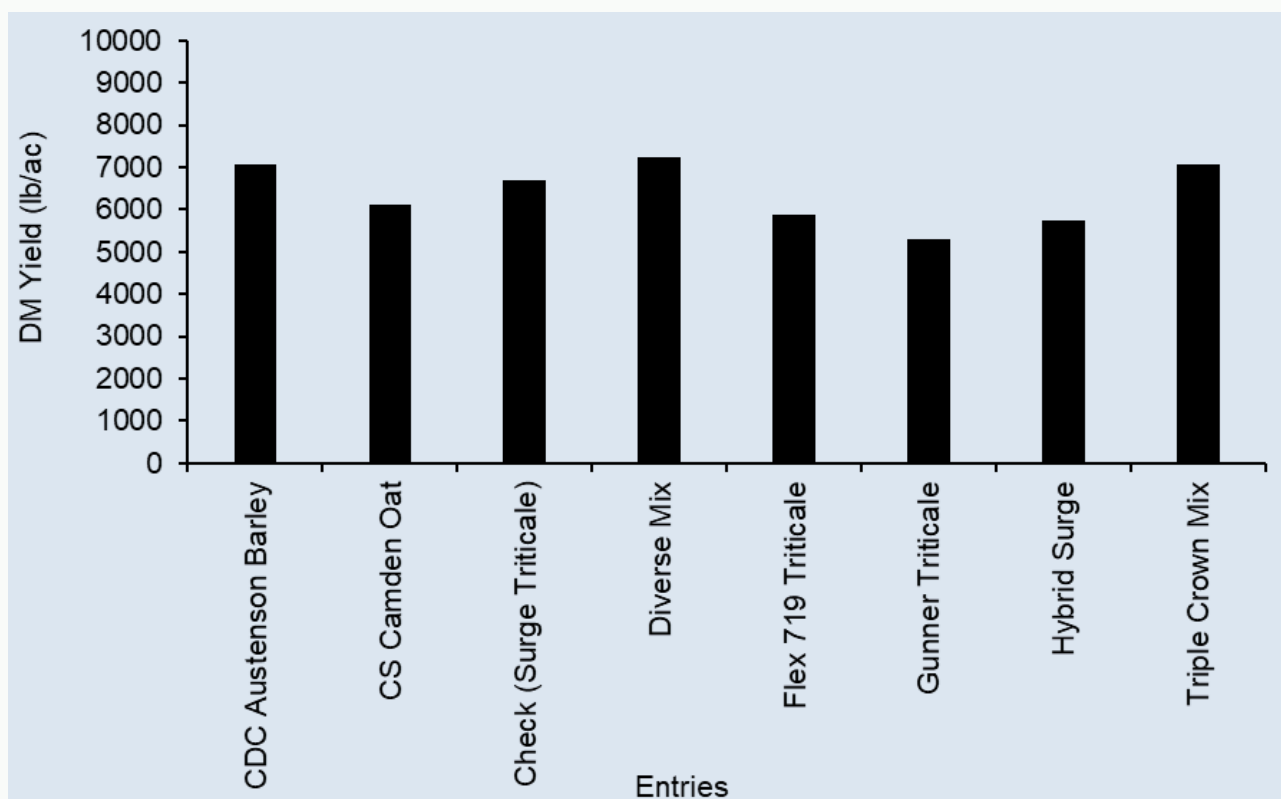


Figure 4. Dry forage yield (lb/ac) calculations for triticale varieties and mixes.

The dry matter forage yields for the triticale varieties were not significantly different, ($p = 0.59$), but displayed a trend with highest yields from Diverse Mix (10 lb/ac), Triple Crown Mix (9.5 lb/ac), and CDC Austenson Barley (9.5 lb/ac). The Untreated Surge Triticale (8.4 lb/ac) also displays a relatively higher yield compared to the other triticale treatments. Other varieties, like Gunner Triticale (4.3 lb/ac), Flex 719 Triticale (6 lb/ac), and Hybrid Surge (5.6 lb/ac), produced lower yields compared to Surge Triticale.

The yield analysis suggests that there is no significant yield differences detected among treatments. However, from descriptive statistics, the Diverse Mix had the highest dry matter (DM) yield (~7500 lb/ac), followed closely by Triple Crown Mix (~7400 lb/ac) and CDC Austenson Barley (~7000 lb/ac) compared to other treatments. They performed better than triticale varieties like Gunner Triticale (~5500 lb/ac) and Flex 719 Triticale (~6000 lb/ac), which had the lowest forage yield. Although no statistical significance was found, Diverse Mix and Triple Crown Mix showed the highest DM yield, making them the best choices if forage yield is the primary criterion.