**Plant and seed characteristics of winter canola (*Brassica napus* L.) varieties in Tennessee**

Canola (*Brassica napus* L.), an important oil seed crop, has many benefits, such as a high seed oil concentration, use as feedstock for biofuel, cover crop, pollinator habitat, and rotational crop with winter wheat. Numerous high yielding cultivars are continuously being introduced to address growing demand and which requires consistent research to determine their optimal performance in a particular ecoregion. Hence, this study was carried out at the Tennessee State University Agricultural Research and Education Center in Ashland City, TN to compare 35 winter canola varieties. Plant count, canopy cover, winter mortality, seed yield, and oil and protein content were determined across the varieties. Open pollinated varieties had significantly greater canopy cover than hybrid varieties both before the frost and after the winter. There was no significant difference in winter mortality between hybrid and open pollinated varieties. Hybrid varieties had significantly greater pod shatter potential and greater oil content than open pollinated varieties while open-pollinated varieties were better for protein content as suggested by this study. Seed yield varied between 160 kg $ha^{-1}$ and 1254 kg $ha^{-1}$, oil content ranged between 43.9% and 48.1%, and protein content varied between 20.9% and 22.5%. Overall, hybrid varieties are recommended for yield and oil content, while open-pollinated varieties are recommended for protein content.

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