

‘ERICKA’ and ‘ATHENA’ Winter Canola (*Brassica napus* L.)

‘Ericka’ and ‘Athena’ winter canola (*Brassica napus* L. spp. *oleifera* (Metzg) Sinsk. f. *biennis*) cultivars were developed for use as an edible oil seed (canola-quality) cultivar by the Idaho Agricultural Experiment Station, Moscow, ID 83844. These cultivars are protected by U.S. Plant Variety Protection (Ericka PVP# 9700371 and Athena PVP pending).

Morphology and Crop Quality

Athena and Ericka emerge quickly and produce a good fall stand compared to other control cultivars (Table 1). This is particularly true when planted late in the fall or when re-cropped by seeding into straw stubble. On average Ericka flowered after 131 Julian days while Athena flowers significantly later, on average 128 Julian days. Athena flowering date is not significantly different from Ceres or Olsen (Table 2). Ericka has short stature (on average 53 inches tall) which means that it is particularly resistant to lodging. Plant height of Athena is not significantly different from Ceres or Olsen (Table 3). However, despite plant heights, Athena is lodge resistant and was found to be significantly less likely to lodge compared to Olsen. Ericka is early to maturity, while Athena plant maturity is intermediate, being significantly later than either Ericka or Cascade, but not significantly different from the other control cultivars. Both Ericka and Athena have a determinate growth habit and plants dry down evenly at maturity, an advantage to the grower because these traits can help avoid seedpod shatter and ease the harvest operation

Average oil content of Athena was 40.0%, while Ericka averaged 39.2%, compared to Ceres at 39.3% (Table 4). Oil content of either Ericka or Athena was never significantly lower than the highest oil content control in any of the trials. Oil quality in Ericka and Athena is very high (Table 5). Both cultivars have less than 1 g kg⁻¹ erucic acid, while Ericka has less than 85 g kg⁻¹ linolenic acid, and Athena less than 92 g kg⁻¹ linolenic acid. The remaining fatty acid profile was not significantly different from the high quality cultivar Cascade. Total seed meal glucosinolates in Ericka were low (12.9 µmol g⁻¹) and were moderate to low in Athena (25 µmol g⁻¹) (Table 6). Both cultivars consistently produced seed meal glucosinolate content less than the 30 µmol g⁻¹ "canola-quality" requirement.

Agronomic Performance Trials

Overall 56 site/years of evaluation, Athena produced significantly higher seed yield (3,332 lb acre⁻¹) than any Cascade, Olsen and Ericka (Table 7). Over the same locations Ericka seed yield was not significantly different from either Olsen or Ceres. Yield advantage of Athena was particularly marked in the re-crop sites. Similarly, Ericka showed an advantage over other cultivars when planted later in the fall.

Table 1. Fall crop establishment (1 = poor, 9 = excellent) of ‘Ericka’ and ‘Athena’ and

Table 7.