

Mixed Canolage – Companion Cropping of Dual-Purpose Winter Canola



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Dual purpose canola is the practice of seeding winter canola during the summer and harvesting the biomass as a forage in the season prior to seed harvest. The harvest may occur either by swathing or cattle grazing. Dual purpose canola has sometimes been referred to as canolage. As canolage is a more concise term we will use it here. In some cases, canolage may be mixed with other plant species in order to control plant maturity and add biodiversity to the system. During the summer of 2019 two mixed canolage studies were established. The companion crop used in both cases was spring forage oats (Fig. 1). The two locations were Dusty, WA



Figure 1. Mixed canolage (oat-canola intercrop grown for forage and canola seed) prior to grazing.

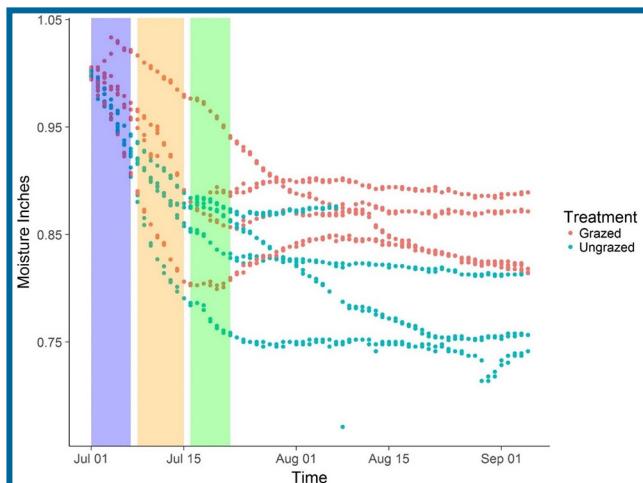


Figure 2. The change in relative moisture following the initiation of grazing in the first week of July. In most cases, the un-grazed plots used more than the grazed plots over the recorded time frame.

moisture was calculated based on the moisture at the start of grazing and the changes in the moisture over the period of grazing were logged (Fig. 2). Figure 2 shows that the grazed plots (pink) used less relative moisture than the un-grazed (blue) plots. This indicates that grazing mixed canolage may reduce the overall water usage of the system when compared with the un-grazed system. Late in the fall most of the Dusty plots had droughted out, and only a subset of the field will be taken to harvest. In the spring of 2020, all but a small section of the canola was terminated. The drought out at the Dusty location is likely due to the early planting date. The Creston location had good winter survival and the full area will be harvested in the July of 2020.

Table 1. Forage values for monoculture canola compared to oat-canola mix.

	Canola	Oat & Canola
Dry Matter	11.6	19
Crude Protein	21.3	14.2
Acid Detergent Fiber (ADF)	16.9	20.2
Neutral Detergent Fiber (NDF)	17.3	29.5
Relative Feed Value (Estimated)	407	231