

acid analysis which is underway concurrently by Jeremy Hansen and colleagues. We hope to understand how canola may impact soil health, both positively and negatively. By understanding the cause of this phenomenon, we can understand the conditions under which it is a problem and possibly how it can be mitigated.

Dual Purpose Winter Canola Grazing and Seed Harvest



ISAAC MADSEN¹ AND STEVE VANVLEET²

¹DEPT. OF CROP AND SOIL SCIENCES, WSU; ²WSU EXTENSION

In order to get the most out of a canola crop many farmers and researchers have been interested utilizing early seeded winter canola as a 'dual purpose' crop. The 'dual purpose' canola would be planted in mid or early summer, grazed in the fall, and taken to harvest in the following spring. However, the effect of fall grazing on the winter survival of canola is unknown. In the fall of 2017, a winter grazing trial was established near Dusty, WA. The canola was planted with a hoe style drill into good moisture on July 19th 2017. The field was divided into 3 pastures. Cattle grazing began in paddock 1 on September 15th and were moved to a second paddock 2 on September 26th, the cattle grazed through pasture 2 much faster than pasture 1, and where moved pasture 3. The grazing in pasture 2 was heavier than pasture 3 and the stand in pasture 2 appears to have been more damaged than pasture 3 (Fig. 1). The canola was harvested the following July with a Wintersteiger plot combine. One harvest swath was cut per pasture ranging from 150-300 ft in length and 5 ft wide (Table 1). Weight gain on cattle was estimated by weighing a sub sample of steers before and after they had grazed the pastures. Weight gain on the steers was used to estimate the economic benefits of grazing. Further work should be conducted in replicated trials, lending a higher degree of certainty to the results.

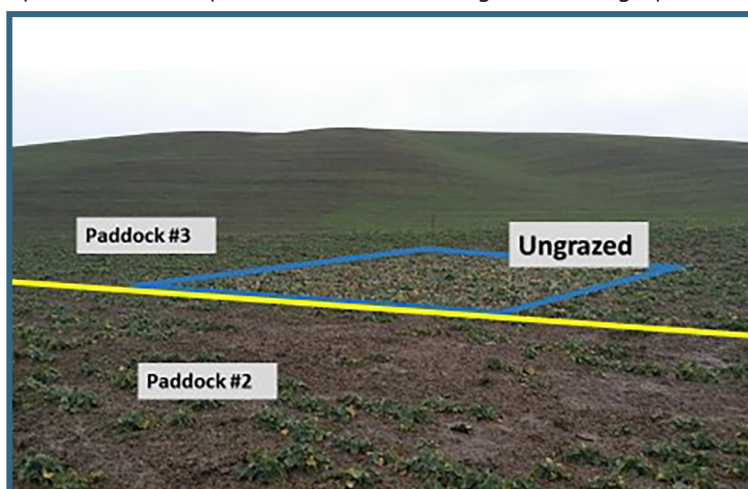


Figure 1. Ungrazed canola, heavily grazed canola (Paddock #1), and lightly grazed canola (Paddock #2).

Takeaways: There appears to be economic potential for grazing winter canola in the fall following seeding. Light grazing of winter canola appears to do little damage to the following canola seed yield, but grazing appears to damage canola yield.

Table 1. Seed yield and cattle gain from canola grazing.

Treatments	Yield (lbs/a)	Elevator price/lb canola seed	Economic value of canola seed	Grazing pressure (46 head)	Economic value for grazing cattle (ADG)	Total Economic Return (\$/a)
Pasture 1	2464	\$0.129	\$317.80/a	Heavy	197.34	515.14
Pasture 2	2143	\$0.129	\$276.45/a	Severe	197.34	473.79
Pasture 3	3322	\$0.129	\$428.58/a	Light	157.87	586.45
Ungrazed	3384	\$0.129	\$436.52/a	None	0	436.52