

# Biodegradable mulches suppress weeds in dryland rice.



## Biodegradable Mulches in BC Dryland Rice Cultivation

Shannon Campbell  
Dept. of Sustainable Agriculture

### Introduction

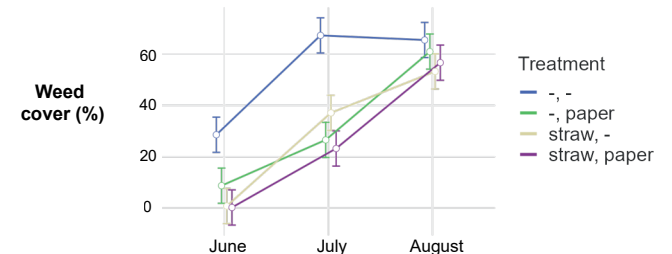
- Flooded rice production is water-intensive and a major source of cropland methane emissions.
- Dryland rice is associated with higher weed competition and reduced yields.
- Biodegradable mulches to reduce weed pressure may serve as a sustainable alternative to flooding.

### Methods

- Treatments of paper and oat straw mulches were applied in a factorial randomized complete block design with four blocks.
- Weed cover was measured, and all weeds removed, in June, July, and August.
- Mature grain was harvested in October and weighed to compare yield across treatments.

### Results

- Mulches suppressed weeds in June and July but not in August (Fig. 1).
- Paper & straw in tandem were most effective vs control ( $p < 0.001$ ) and there was an interaction between straw and paper treatments ( $p = 0.039$ ) (Fig. 1).
- Mulching had no effect on yield.



**Figure 1.** Weed canopy coverage (%) by mulch treatment (control, straw, paper, and both) on three weeding rounds in June, July, and August. Error bars denote standard error.

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