



Photo by: Invasive Species Council of BC



## ***Potentilla recta* invasion of rangelands in East Kootenay, British Columbia: Examining best management practices**

**September 21, 2019**

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## Sulphur Cinquefoil (*Potentilla recta*)

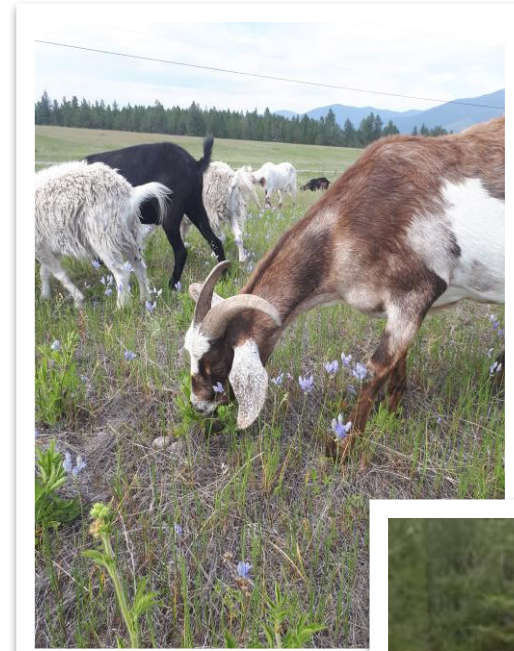
- Perennial forb native to Eurasia
- Introduced to North America prior to 1900
- Lives up to 10 yrs
- Prolific seed producer
- Forms dense and continuous stands





## Management of Invasive Plants in Rangeland

- Target Grazing:
  - The application of livestock at a specific season, duration, and intensity to control invasive plants
- Herbicide Application
- Native Seeding



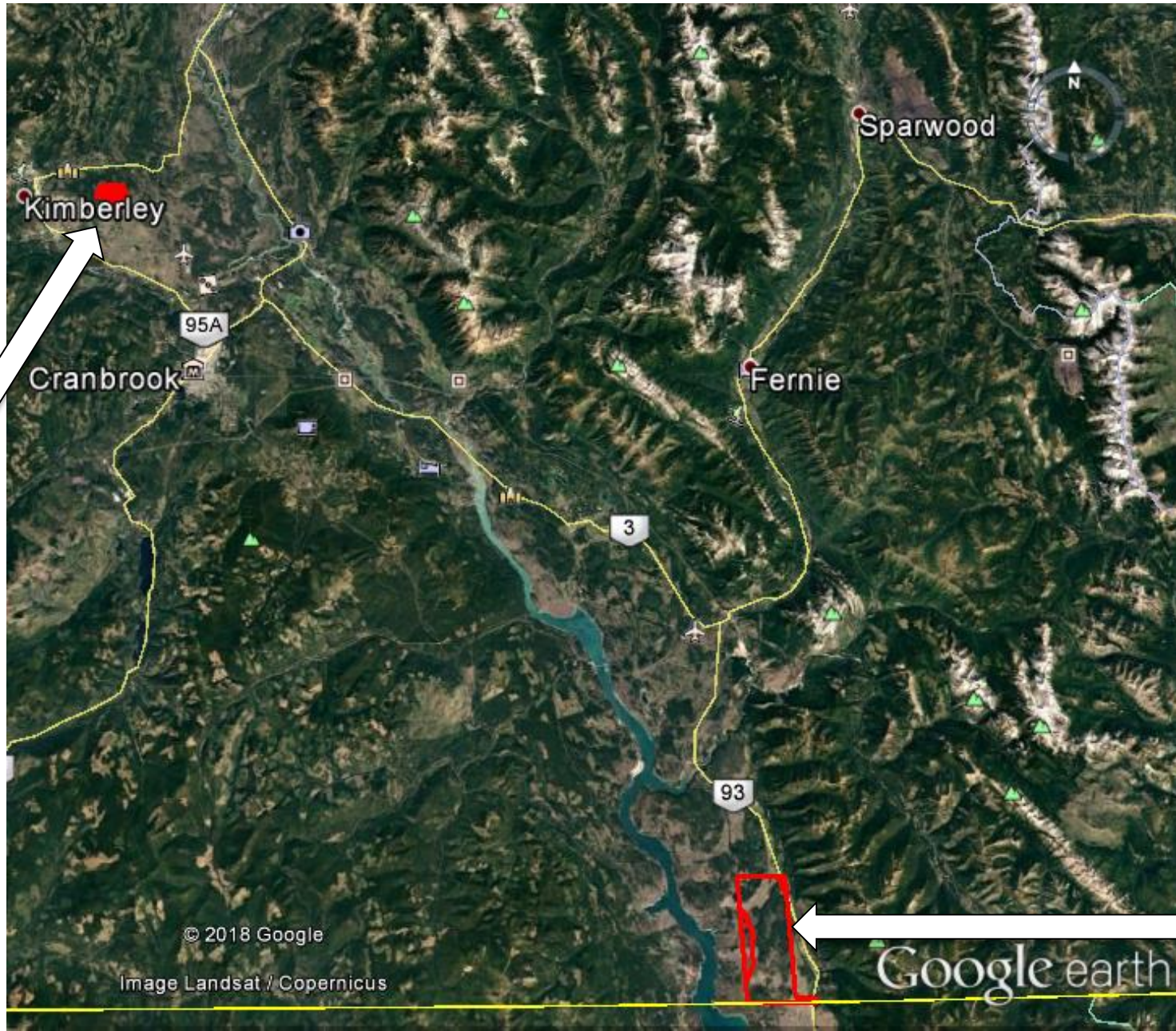
## Project Goal:

Identify mechanisms driving sulphur cinquefoil invasion in rangelands in East Kootenay, British Columbia and best management practices to control sulphur cinquefoil





# Field Sites: East Kootenay, BC



Wycliffe

Tobacco  
Plains  
Indian  
Reserve

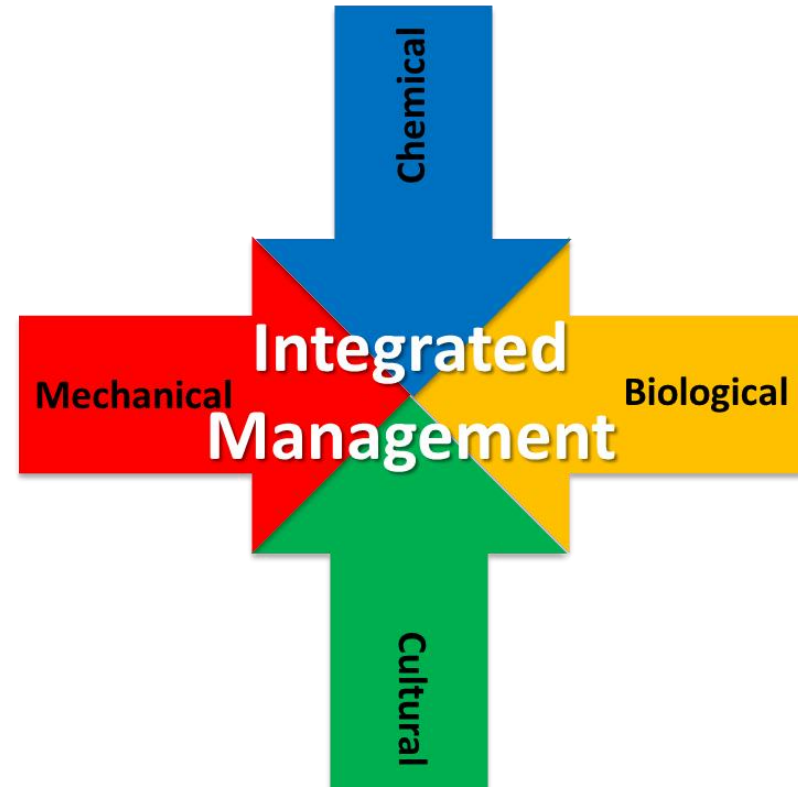


## Treatments

1. Targeted goat grazing once per season
2. Targeted goat grazing twice per season
3. Targeted goat grazing once per season with herbicide application
4. Targeted goat grazing twice per season with herbicide application
5. Herbicide application only

+

Seeding of native rangeland species  
with and without fertilizer





## Field Design

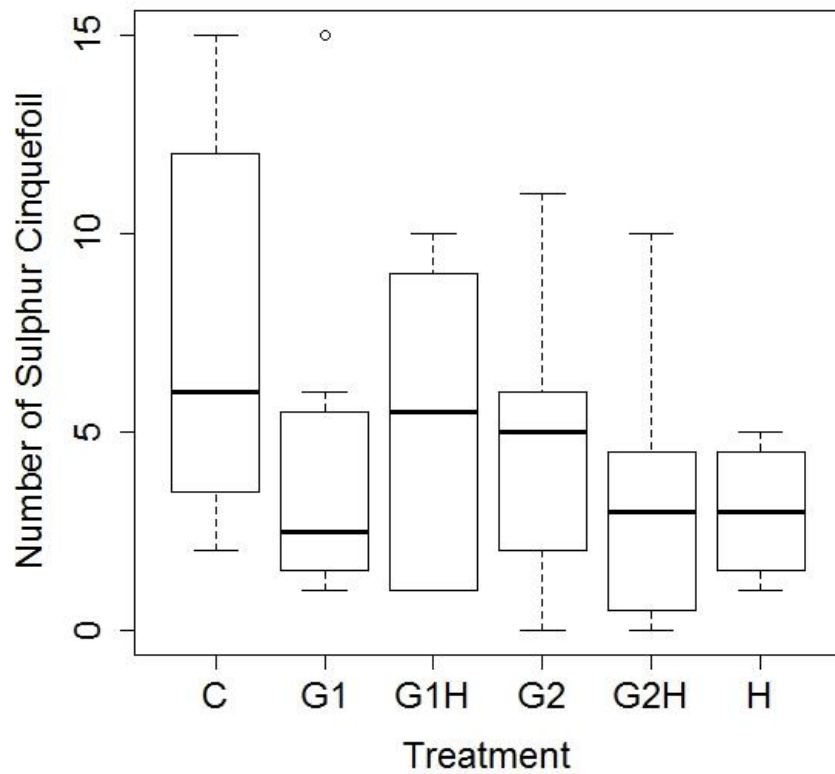
### Measurements:

- Percent cover
- Aboveground biomass
- Density, height, number of flowers/flower buds/seed heads of sulphur cinquefoil
- Soil chemical properties (e.g., carbon, nitrogen)

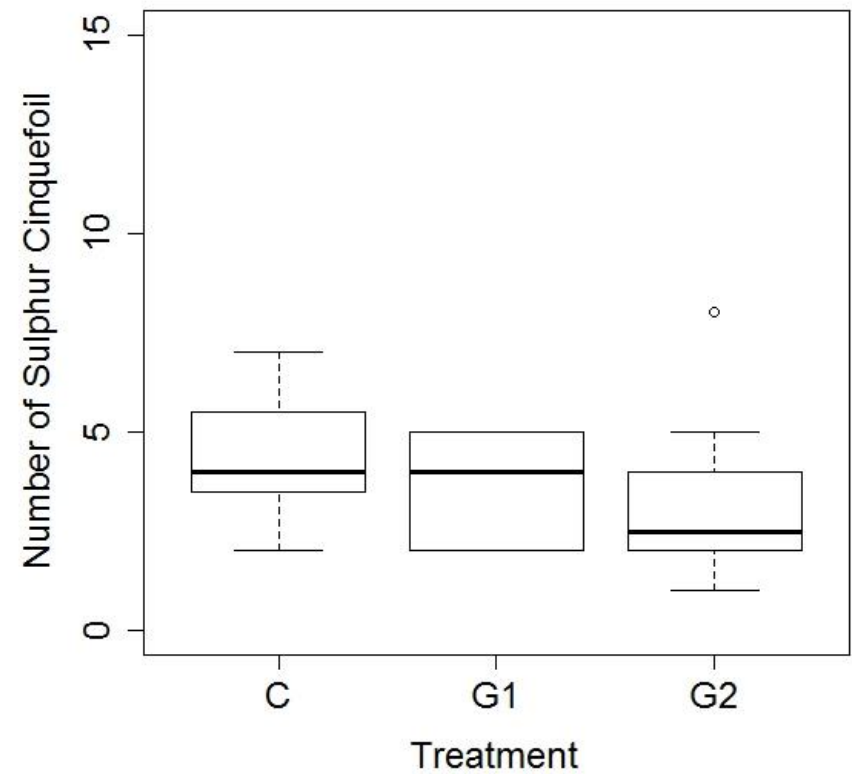


# Treatment Effects on Number of Sulphur Cinquefoil

## Tobacco Plains



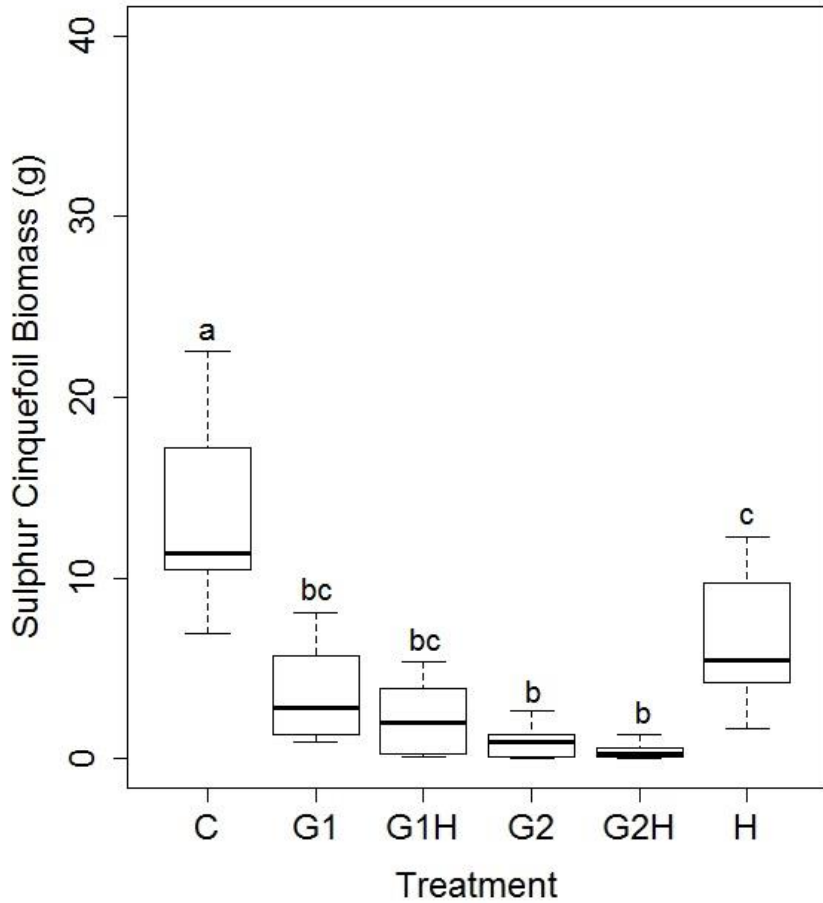
## Wycliffe



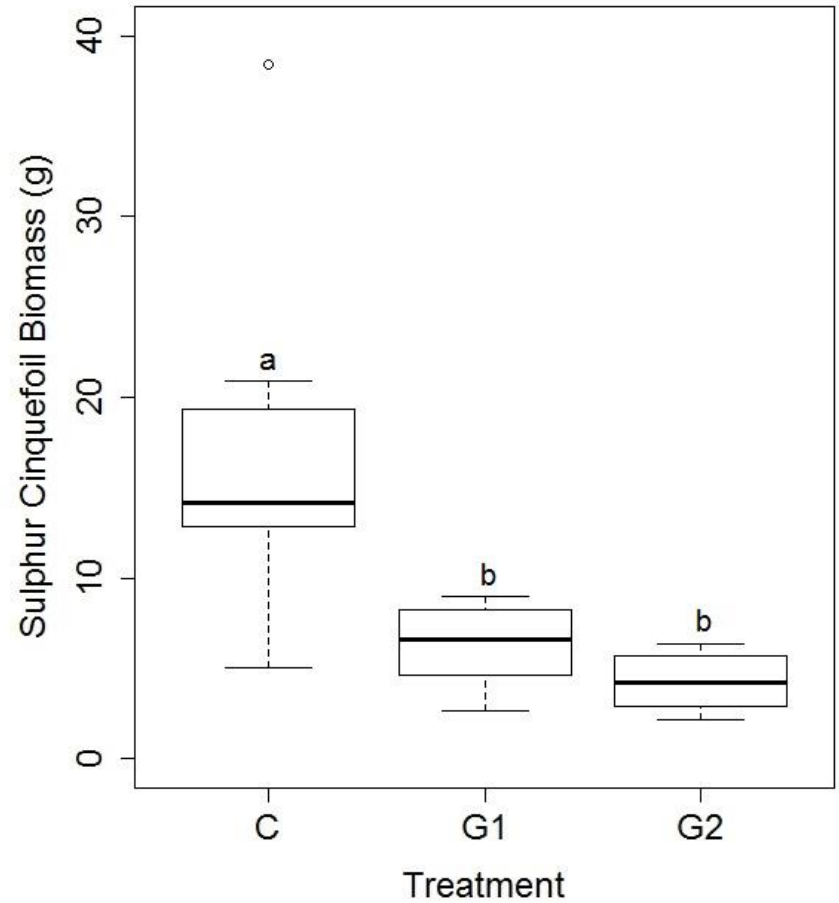


# Treatment Effects on Sulphur Cinquefoil Biomass

## Tobacco Plains



## Wycliffe

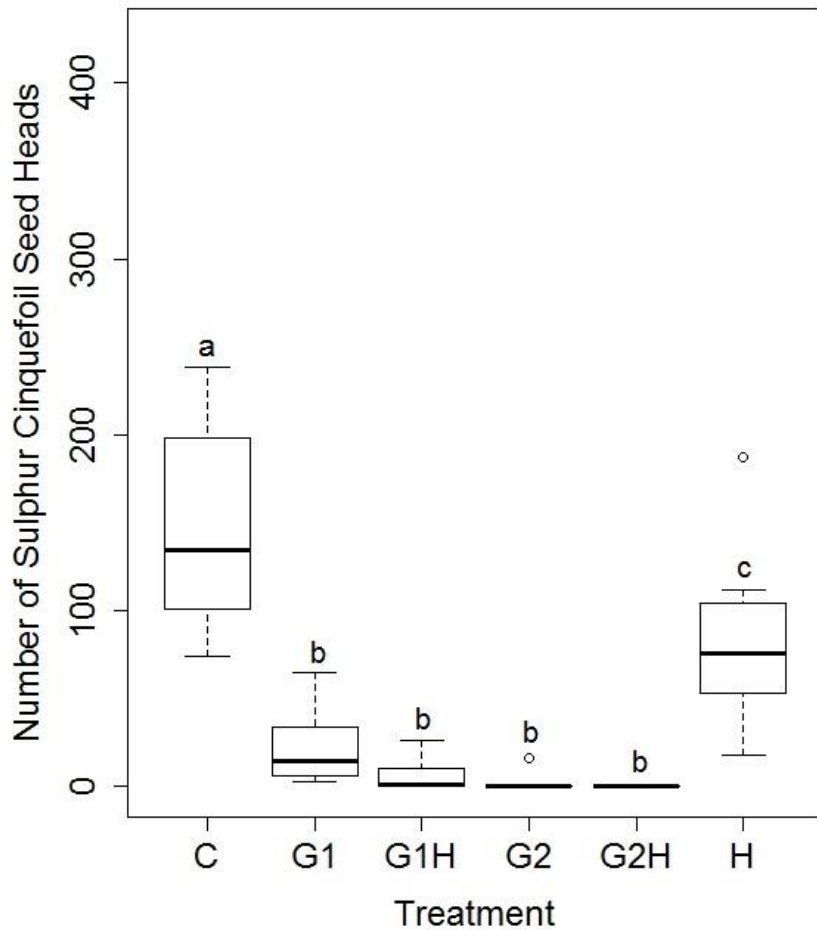


## Herbicide Effects on Sulphur Cinquefoil

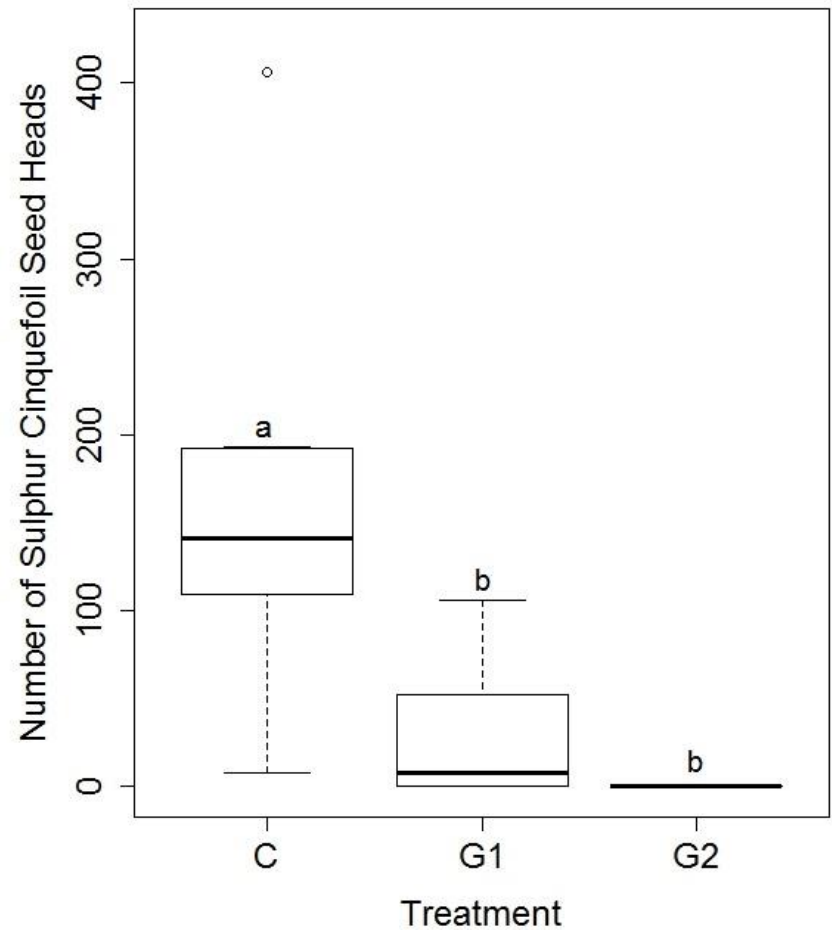


# Treatment Effects on Number of Sulphur Cinquefoil Seed Heads

## Tobacco Plains



## Wycliffe





## Next Steps

- Greenhouse study
  - Examining competition (sulphur cinquefoil vs native forbs and grasses)
- Year 2 of treatment implementation
- Plant community analysis



# Questions?

