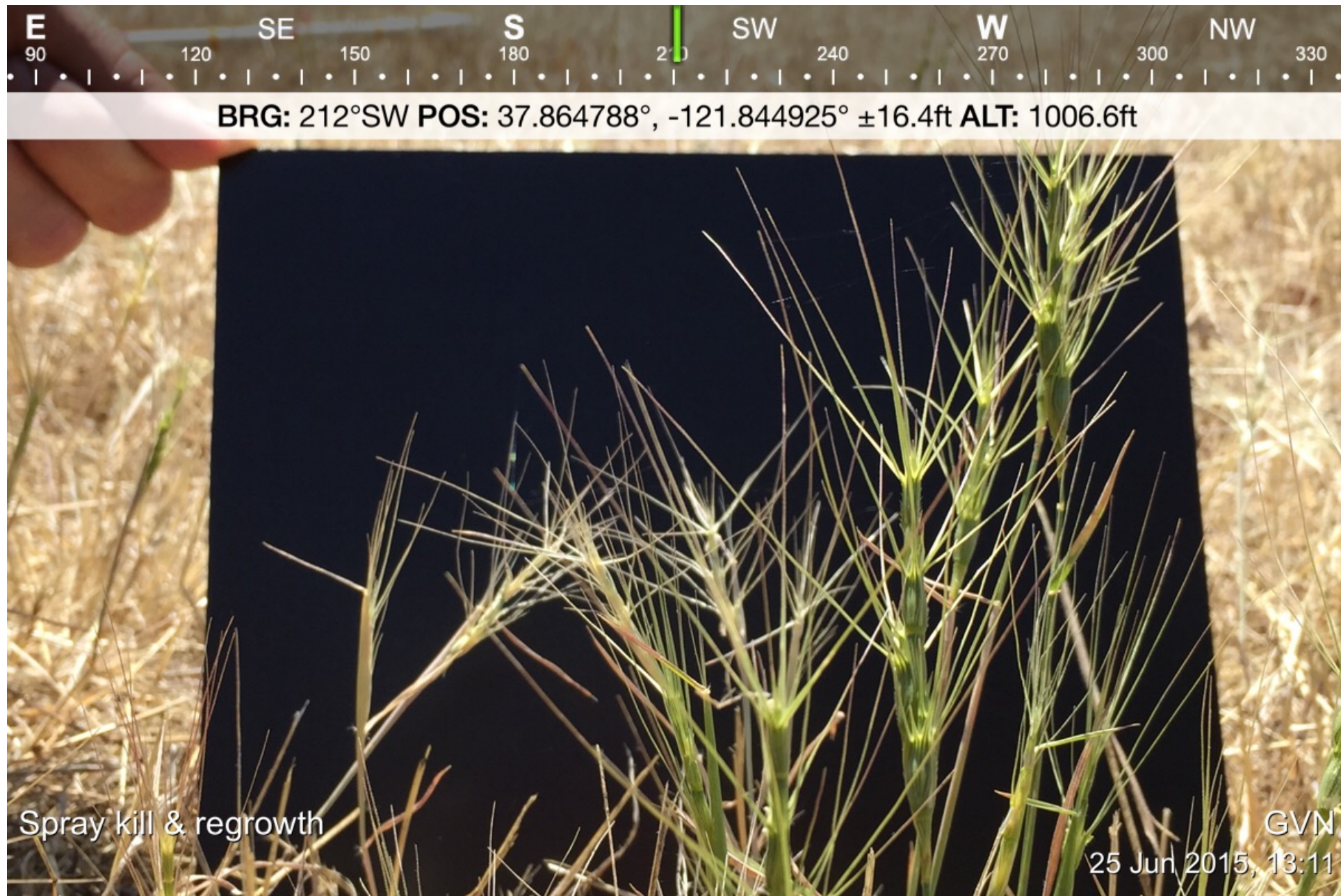




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A  
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S**



**2  
0  
1  
5**

**EBRPD IPM Department**

**Pamela Beitz & Casey Brierley**



# Barb Goat Grass

*Aegilops triuncialis*

- Colonizes serpentine soils, vernal pools, oak woodlands, refugia
- Up to 5 years seed viability
- Sibling seeds guarantee at least a 2nd year
- Not palatable once the seed head emerges
- Readily tillers and reproduces after mechanical treatment
- Roads appear to be major vector
- Thatch promotes BGG germination/suppresses competitors

# Medusahead vs. Barb Goat Grass






# Vulnerabilities

- Late summer maturation
- Relatively short lived seed bank
- Fire increases germination



# Challenges

- Current and expected extent of infestation
- Money
- Person power
- Knowledge & will
- T&E plant species
- Selective herbicide registered for rangeland



# Goals

Build an army

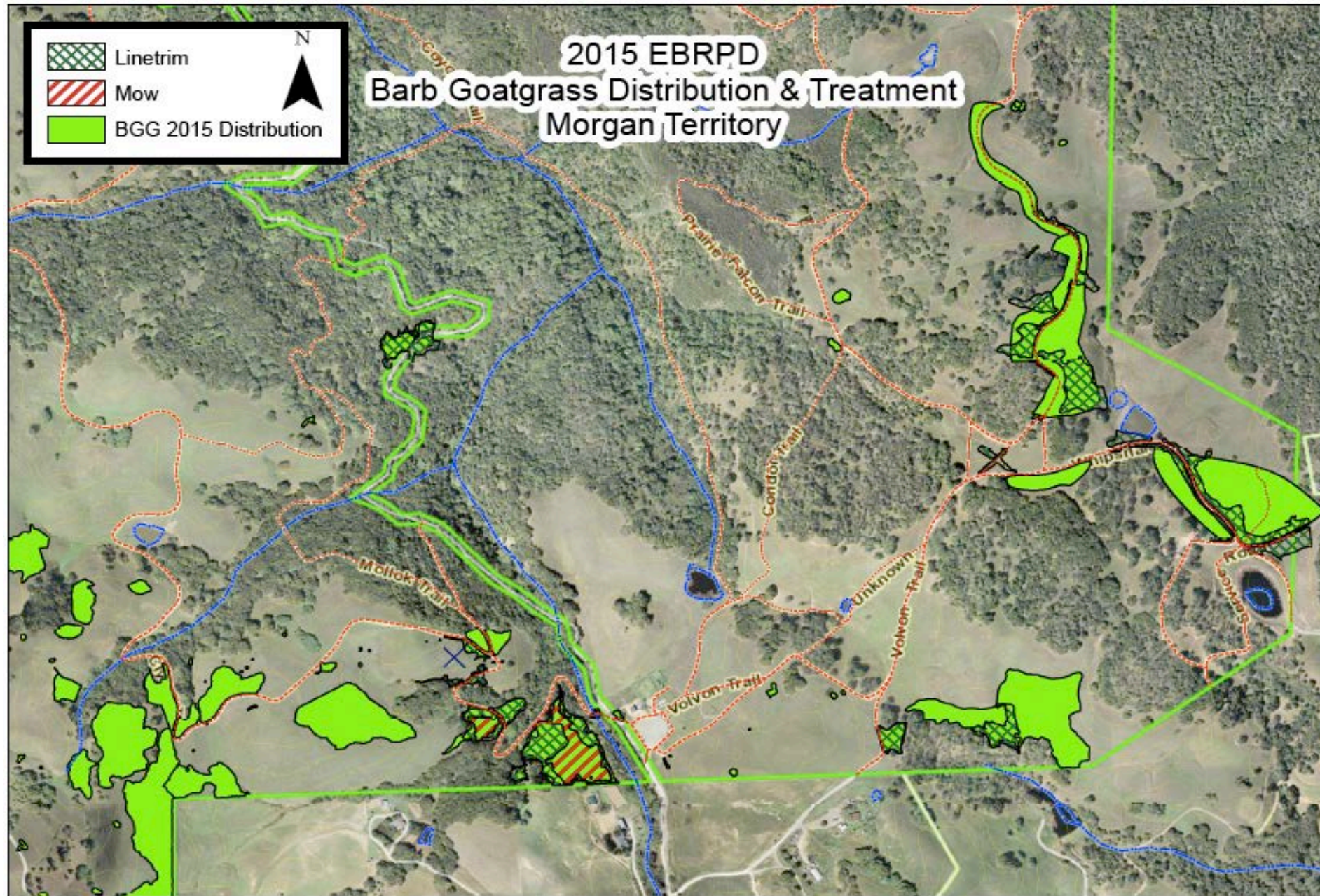
## Objectives

1. Educate, Involve and Inspire
2. Develop a flexible strategy that:
  - Practical & effective by park staff & volunteers
  - Integrated Approach: Reduce herbicide
  - Practical & effective on small, outlier populations, spreading edges
  - Practical & effective on sensitive areas where chemical is not possible



## Status

- 110 acres in 4 parks
- All populations in grazed lands
- Many comingle with listed plant species





# The Plan

- Line Trim
- Follow Up Treatment
  - Spot spray w/ glyphosate product
  - Hand Pull
- Quick Quantitative sampling
- Collaborate





# Sampling.....



## South East Elevation

BRG: 326°NW POS: 37.817940°, -121.797256° ±16.4ft ALT: 2030.9ft







## Line Trimming

- Lowest cut on complex surface
- Avoided take
- Approximates a strategy of rapid response to outliers



# More efficient mowing in old fields with little debris







Line  
Trimmed  
Litter



Mulched  
Mow  
Clippings





**BGG regrowth in decomposed litter**

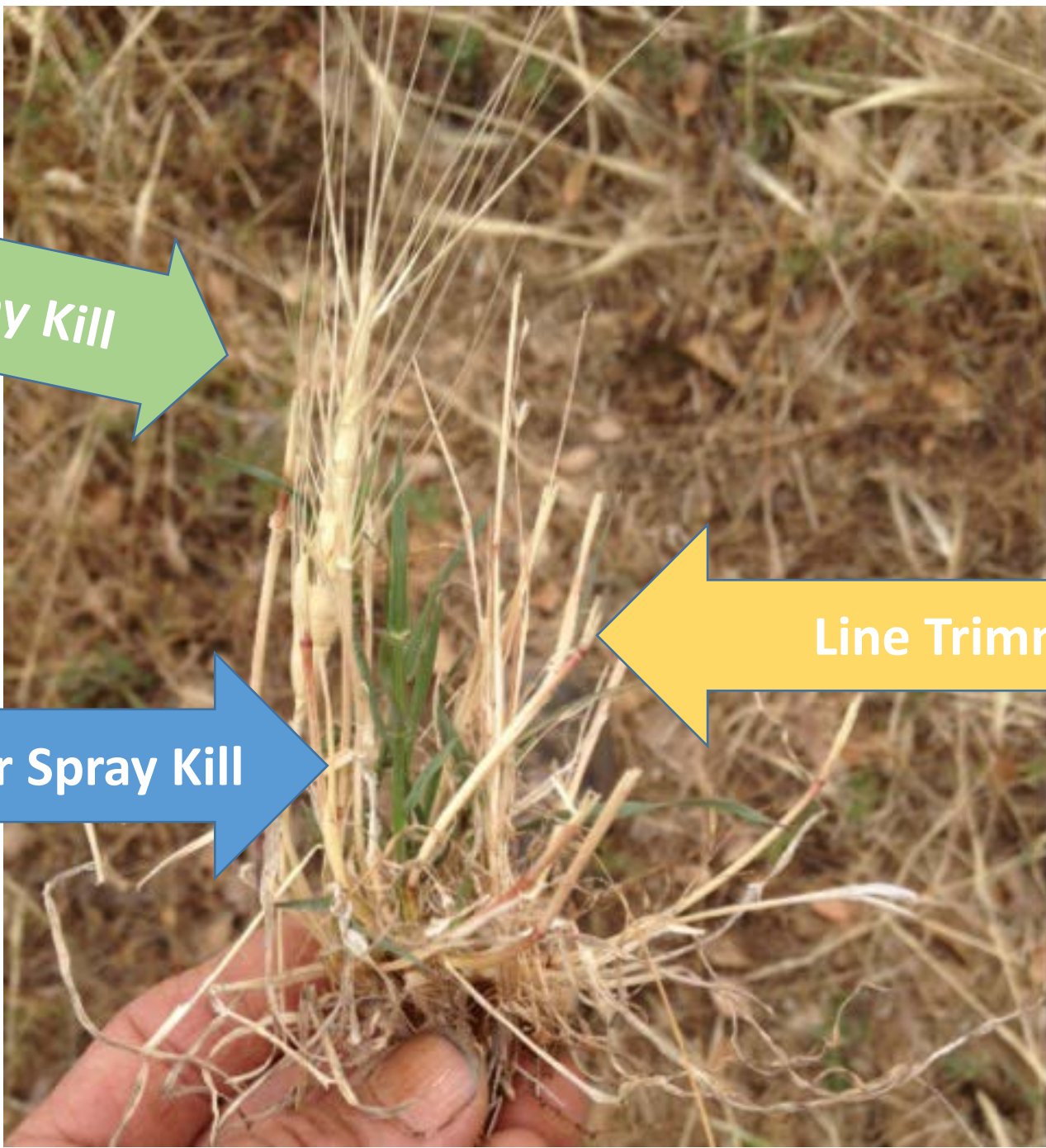




*Resprout Spray Kill*

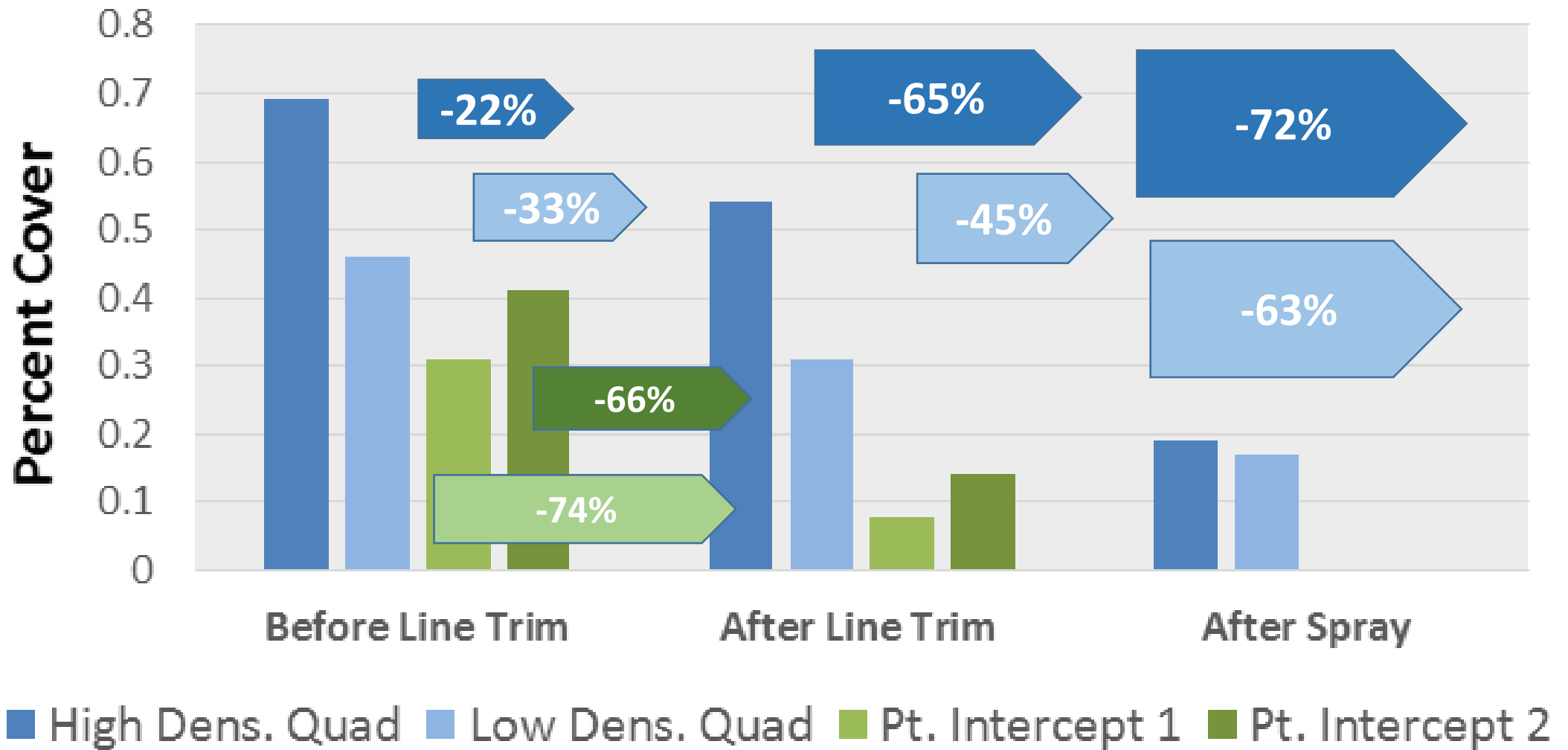
Resprout after Spray Kill

Line Trimmed





# BGG Percent Reduction



Park	Method	Date of treatment	Phenology at 1st Treatment	Follow Up	Time after 1st Treatment	Phenology at 2nd treatment	% Cover Reduction	Gross Acreage	Acres Treated	% of Total Treated	Man Hrs total	Cost/ Acre
GVN	Line Trim	May 13	Just before flowering	RUP Spot Spray	33 days	seed elongation of regrowth	63-74%	7.68	1.39	18%	36	\$668
MT	Line Trim/ Mow	May 21-29	Just before flowering	RUP Spot Spray	21-35 days	seed elongation of regrowth	66-74%	85.40	13.83	16%	276	\$516
						Totals	70% avg	93	15	16%	21 man hrs/ac	\$528 avg



# Lessons Learned

- Proper timing prior to flowering
  - Seed head sampling protocol
- Proper timing to Follow up, near 21 day mark
  - For about or greater than 70% reduction
- 3<sup>rd</sup> Treatment required for 100% seed reduction
- BGG shows robust regrowth in thatch, richer environments
  - The older the infestation, the more follow up needed
- Multiple Constraints require flexibility in treatment options
- Clethodim not registered for grazing
- Listed species require higher level of skill
- Line trimming low impact to vertebrate species

# Looking towards next season.....

- Priorities for next season:
  - Treat populations w/ listed species
  - Spreading edges
  - Outliers
- Standardize monitoring pts. and protocols
- Mechanical
- Chemical
- Cultural
- Collaborations



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