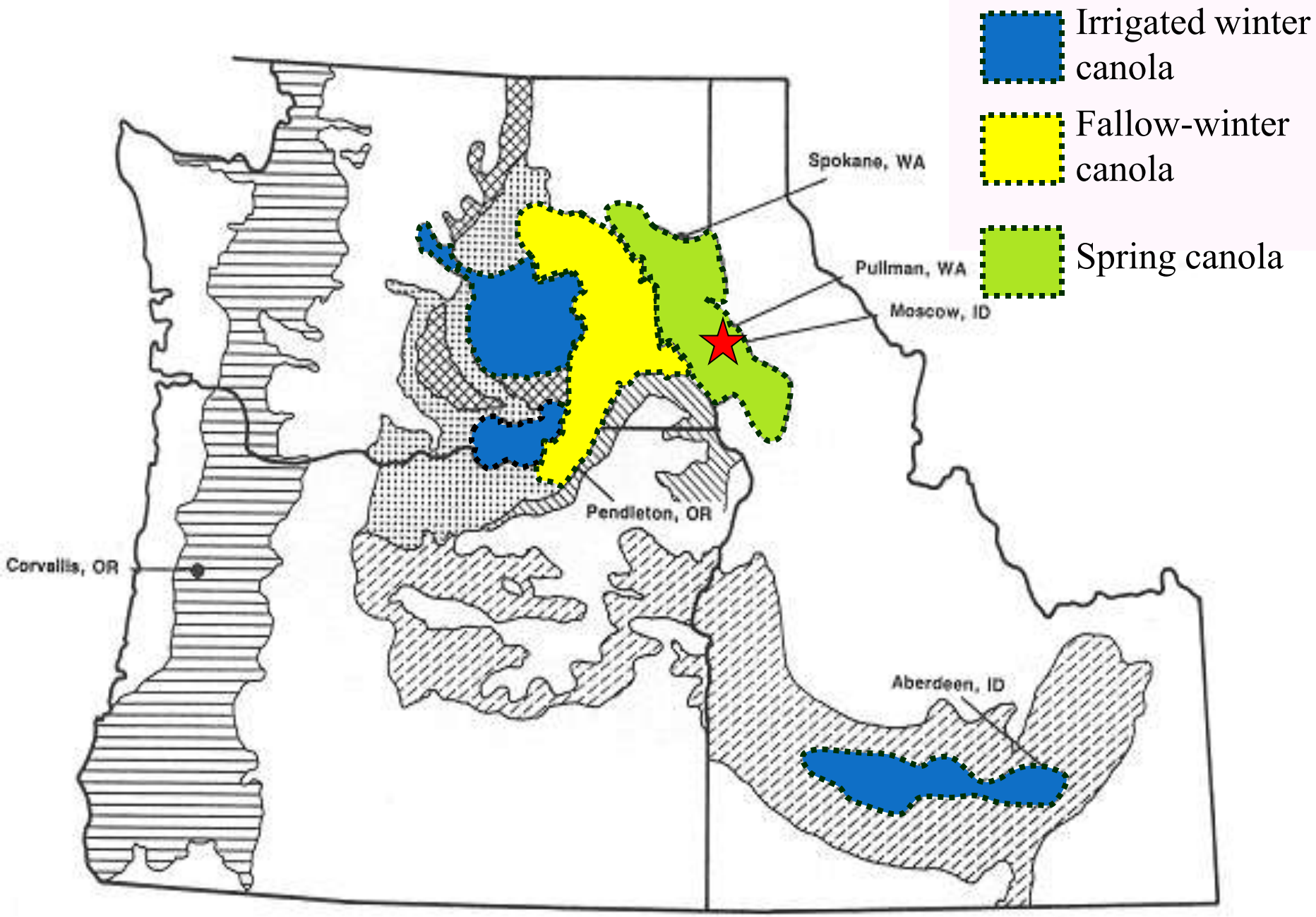
Winter Canola for Livestock Feed and High Seed Yield

Canola Research Conference
Long Beach, CA, November 2-3, 2010

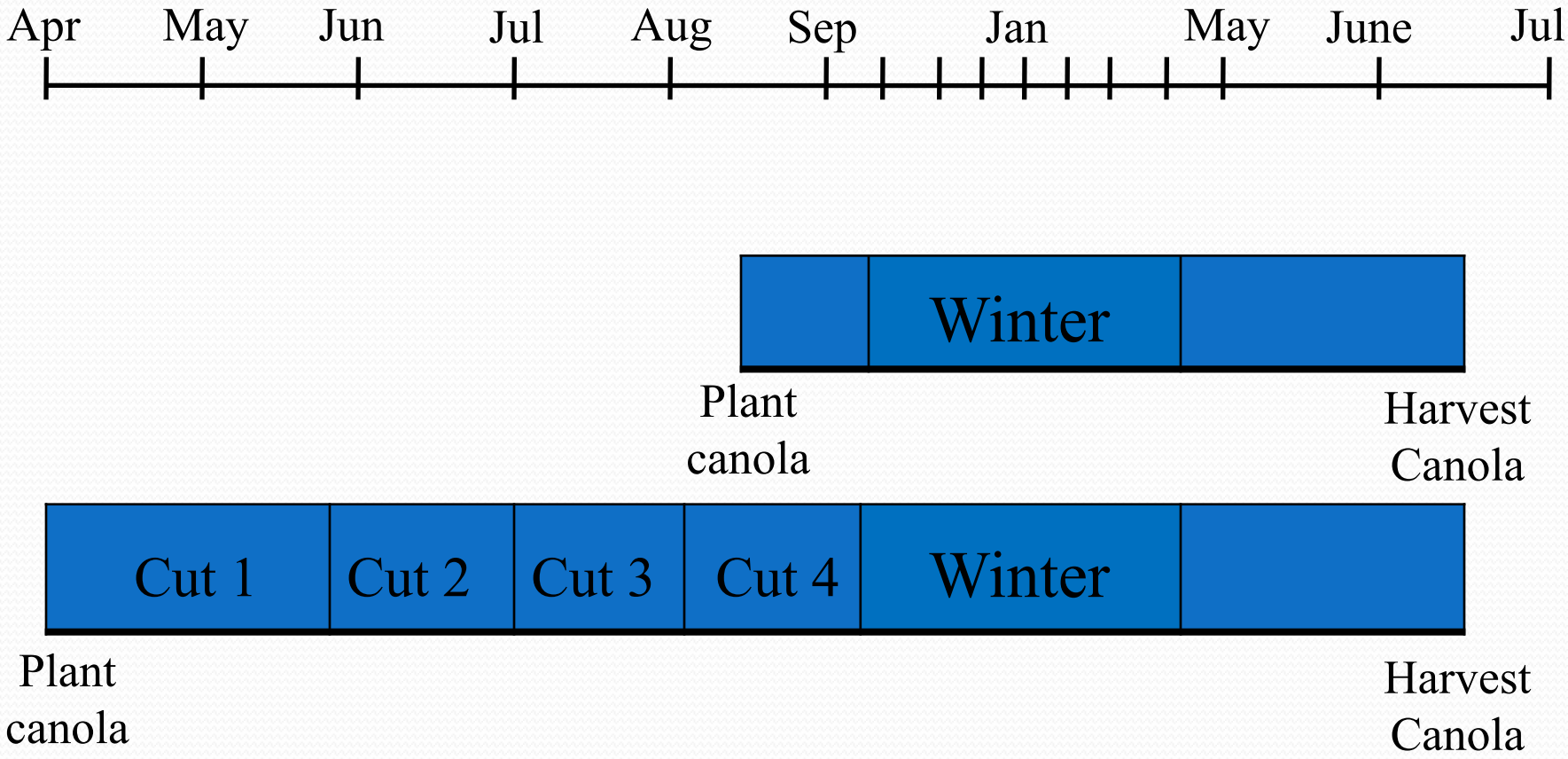
Jack Brown & Clark Neely
University of Idaho


Irrigated winter canola
Fallow-winter canola
Spring canola
Spokane, WA
Pullman, WA
Moscow, ID
Pendleton, OR
Corvallis, OR
Aberdeen, ID

Reasons

- Dual purpose crops can increase profit for single crop.
- Demand for high quality forage produced on site.
- Increase crop rotation flexibility.
- Cover crop.

Timeline


Apr
May
Jun
Jul
Aug
Sep
Jan
May
June
Jul
Winter
Plant canola
Harvest Canola
Cut 1
Cut 2
Cut 3
Cut 4
Winter
Plant canola
Harvest Canola

- ✓ Years
  - Summer 2008-’09
  - Summer 2009-’10
- ✓ Plot Size
  - 7’ x 25’ (175 ft^2)

- Split-plot design.
- Two cultivars.
- Three planting densities.
- Four planting dates.

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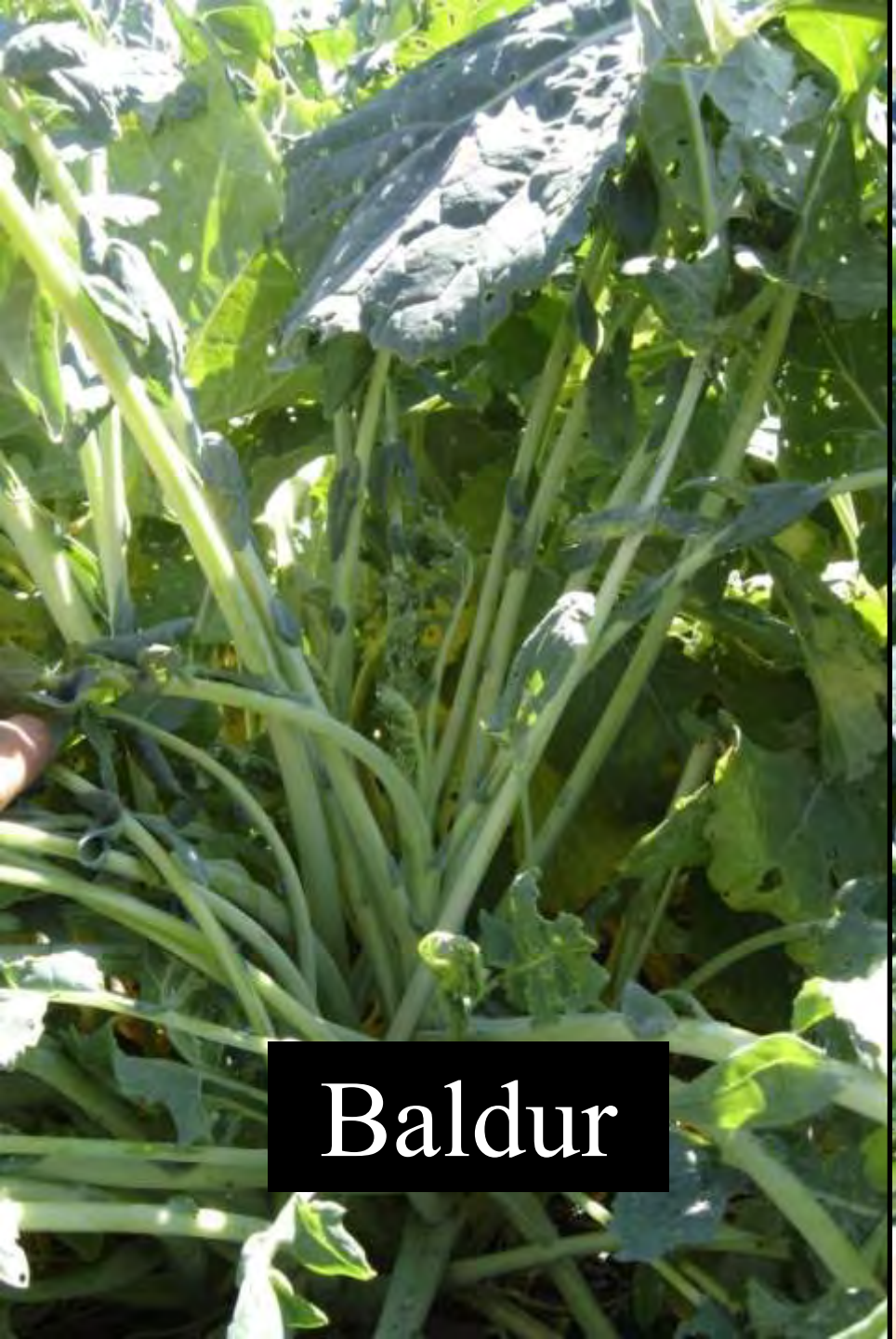
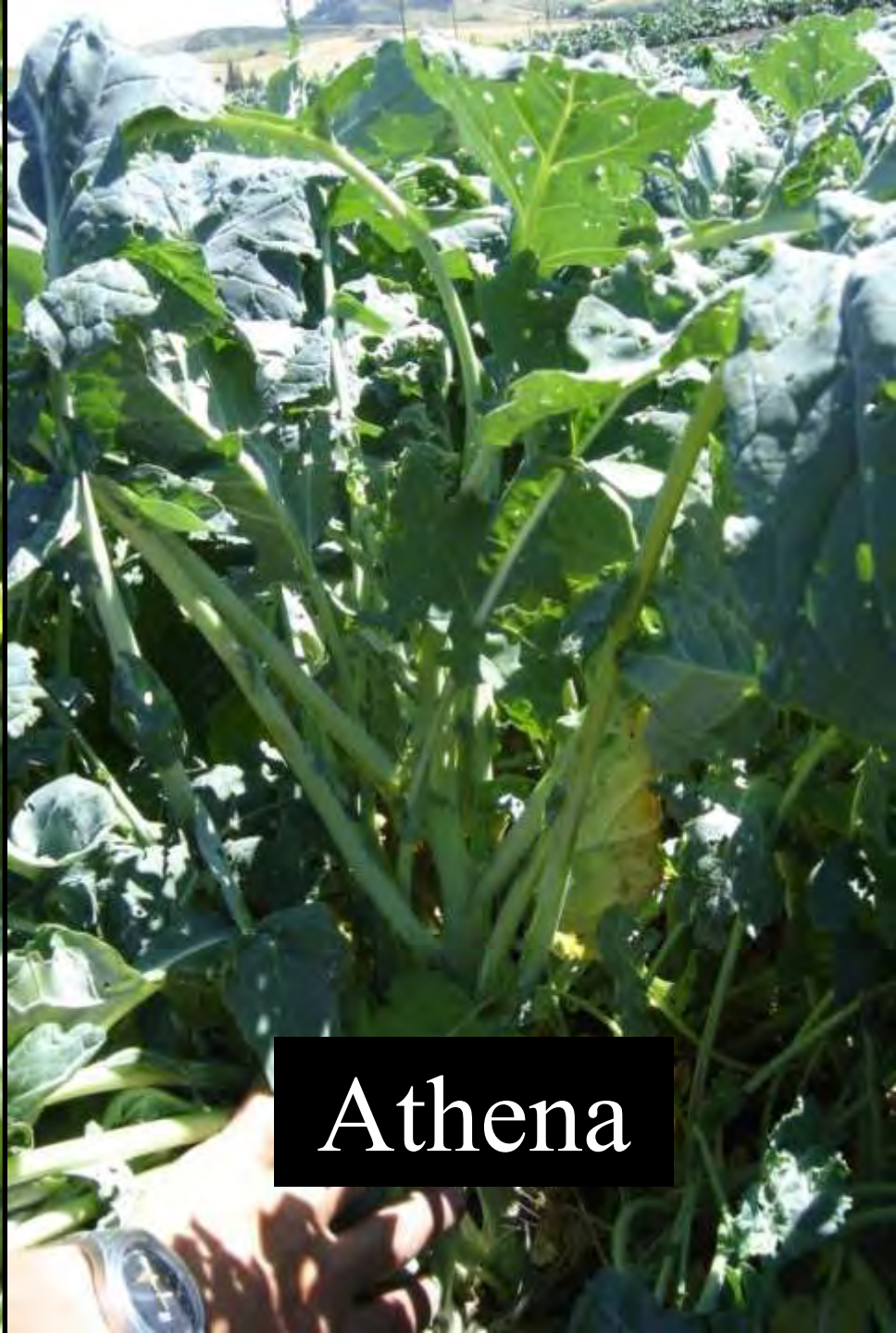
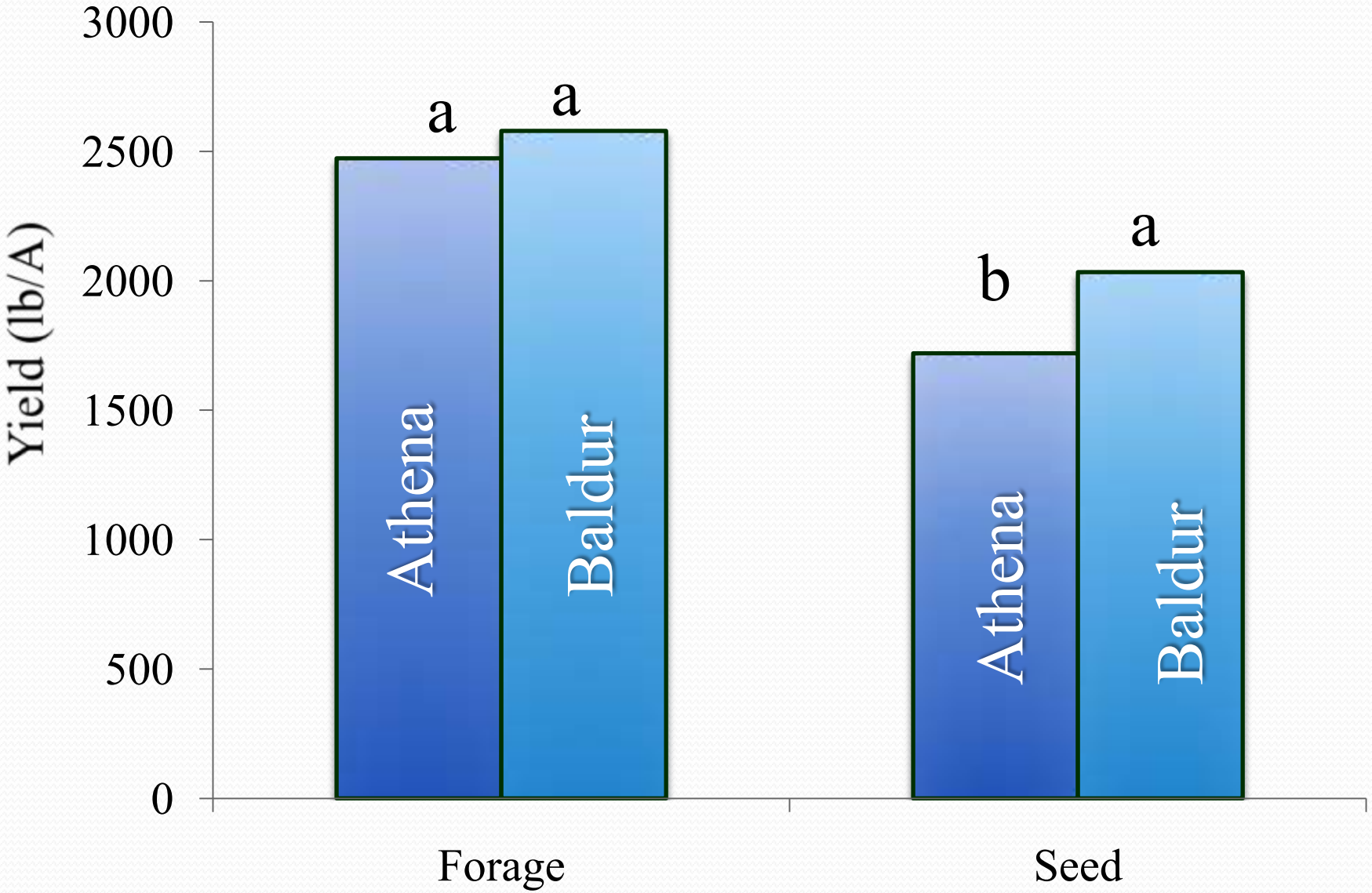
Forage Yield


Baldur

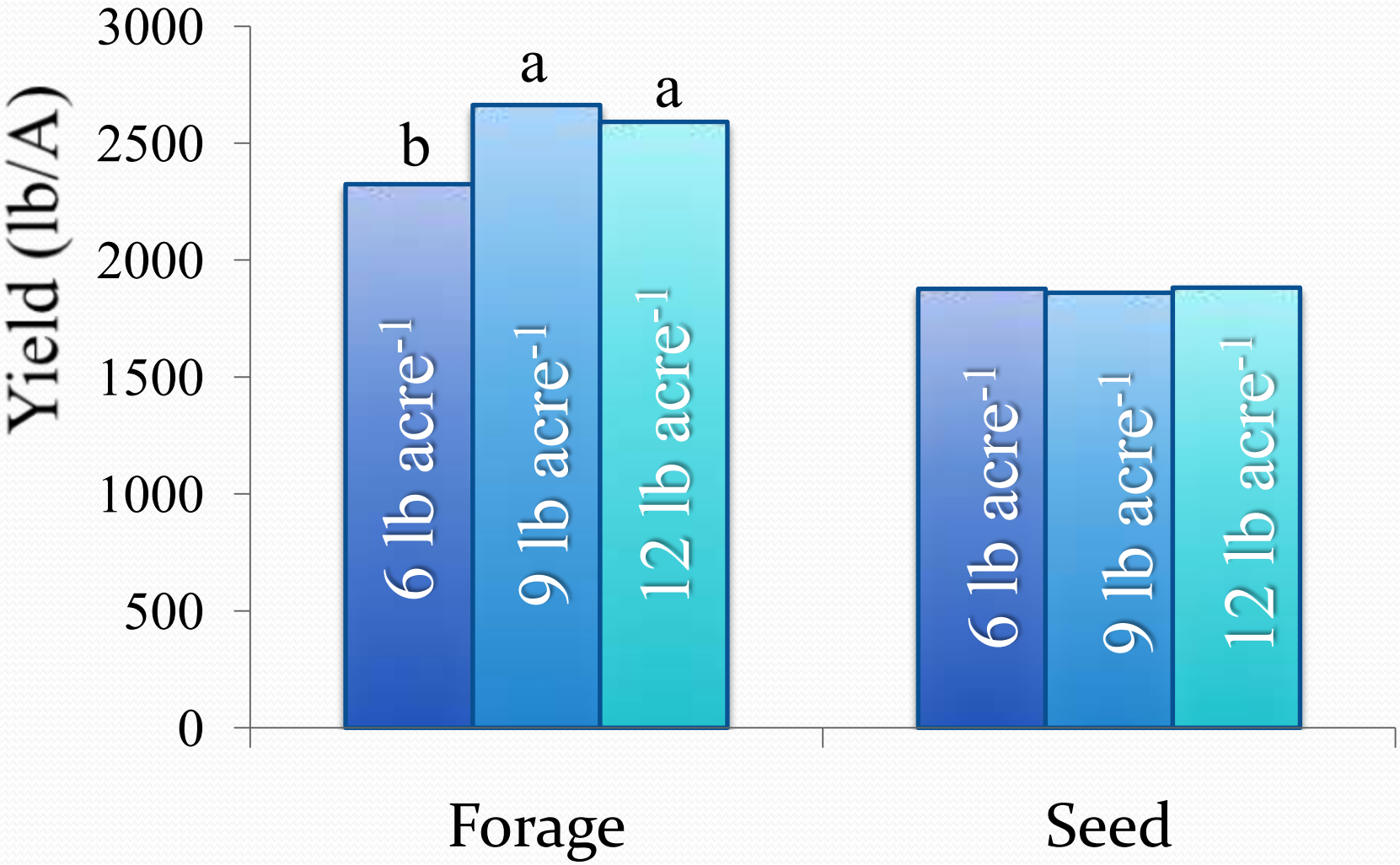

Athena

Cultivar Effect



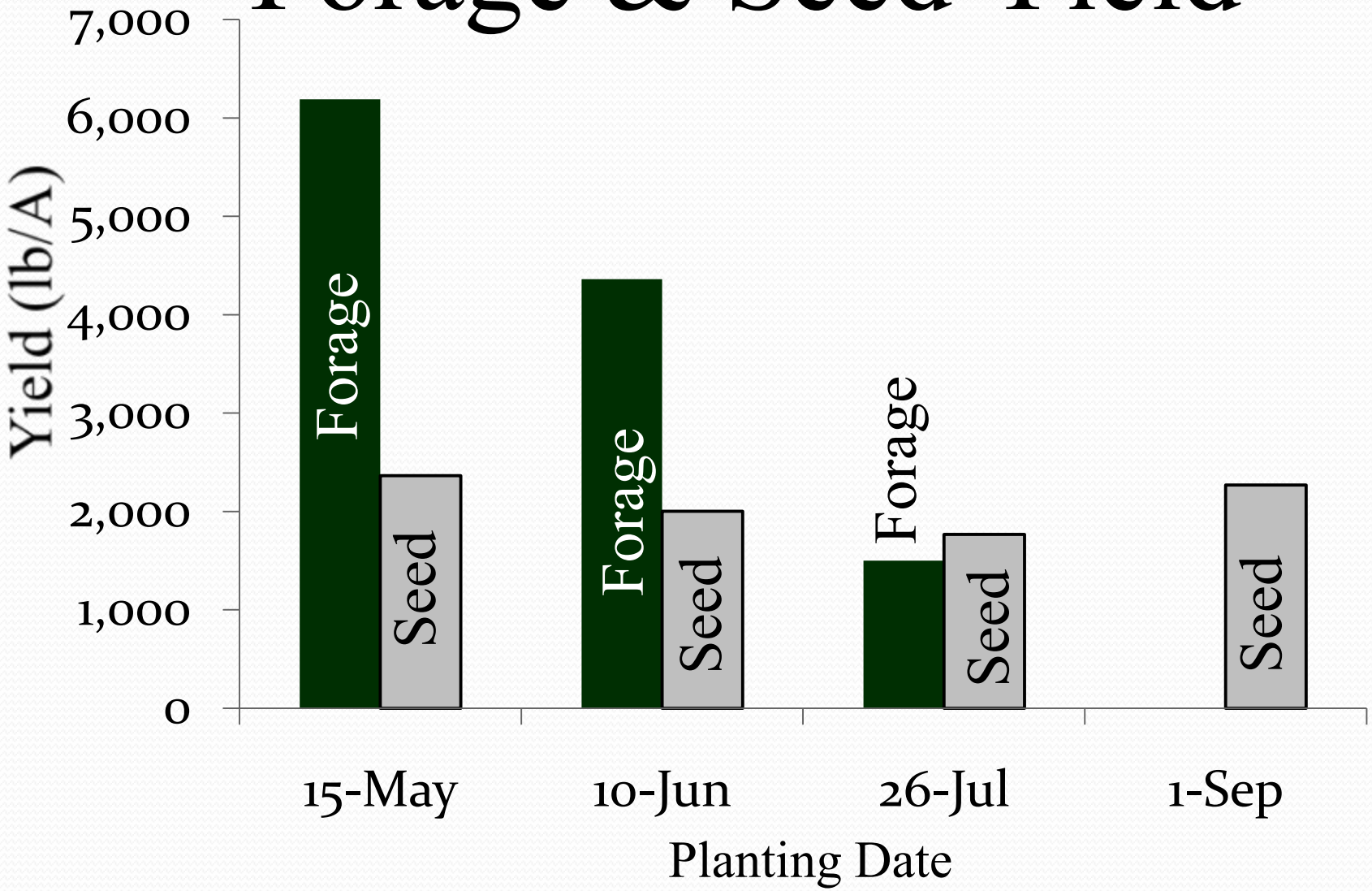
9 lb/a 12 lb/a 6 lb/a

Planting Rate

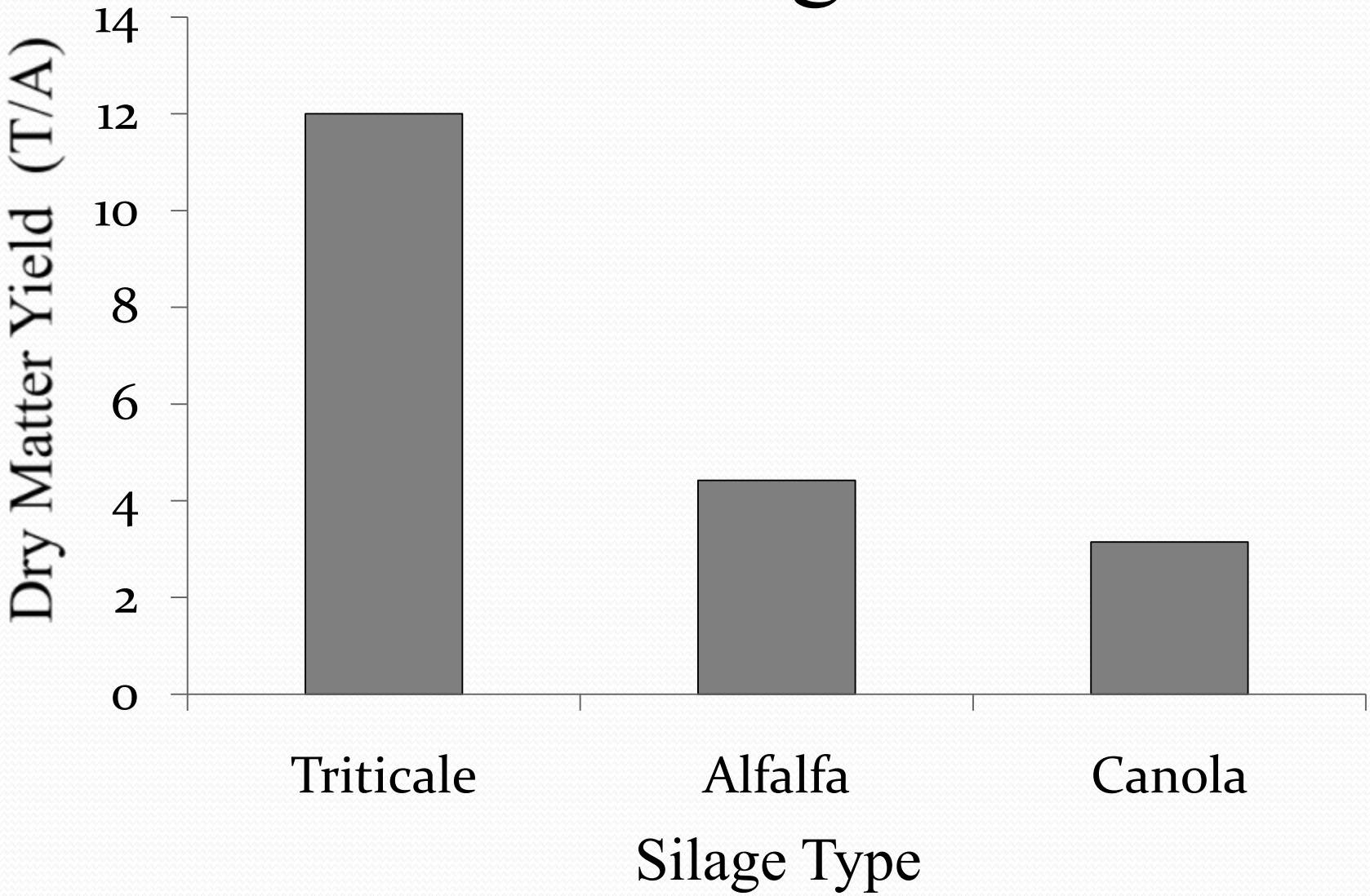


Jul 26
Sep 1
May 15
Jun 10

Forage & Seed Yield



Idaho Forage Yields



21
22
23
24
25
26
27
28

Micro-silos

Ensiling Process:

(1) Harvest biomass.

(2) Dry down to 60-70% moisture in driers (24-48 hrs).

(3) Used vacuum sealer.

(4) Seal 1 gallon bags.

(5) Ensile for 2 months.

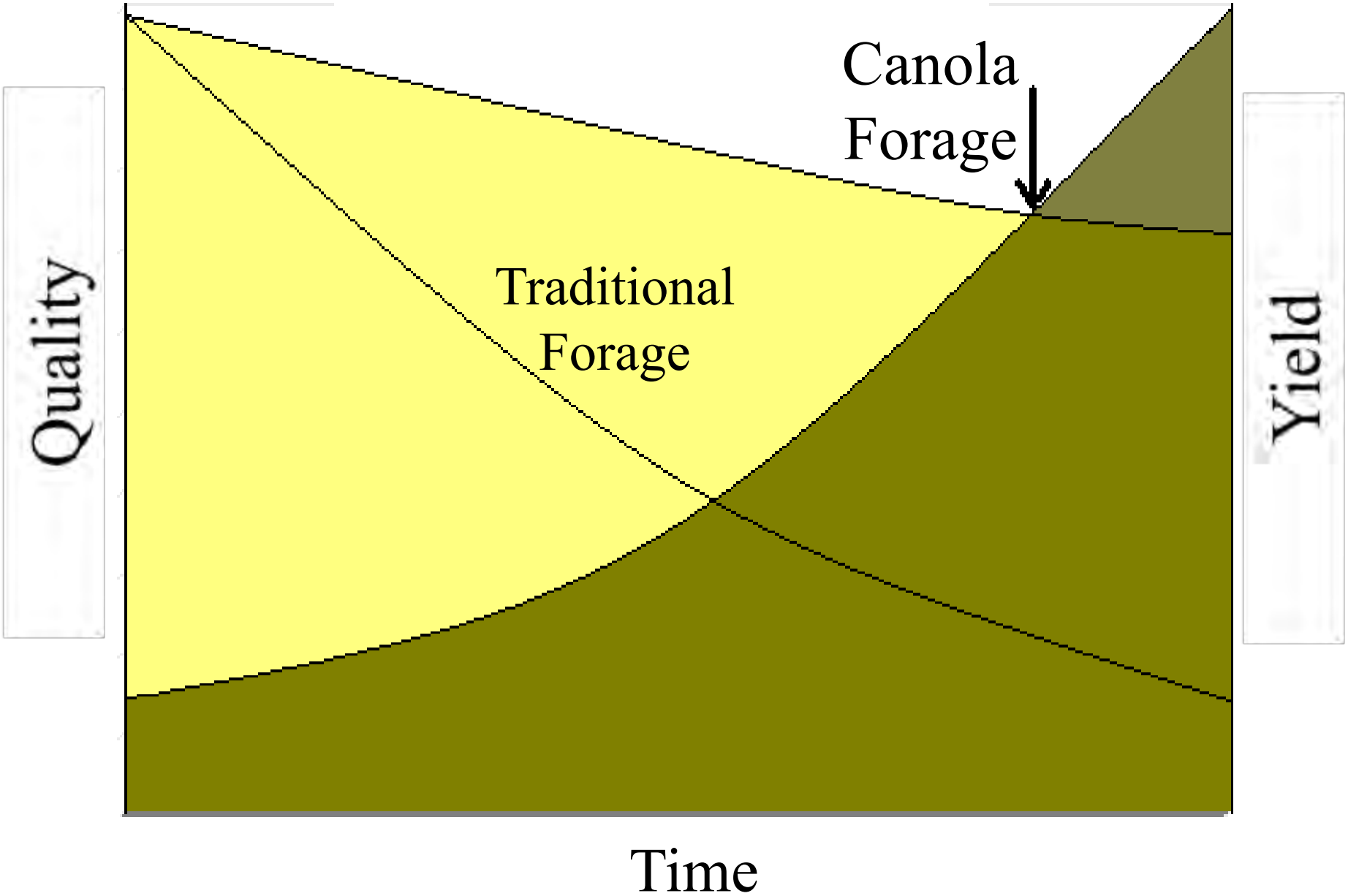
Quality Analysis

✓ Analyze:

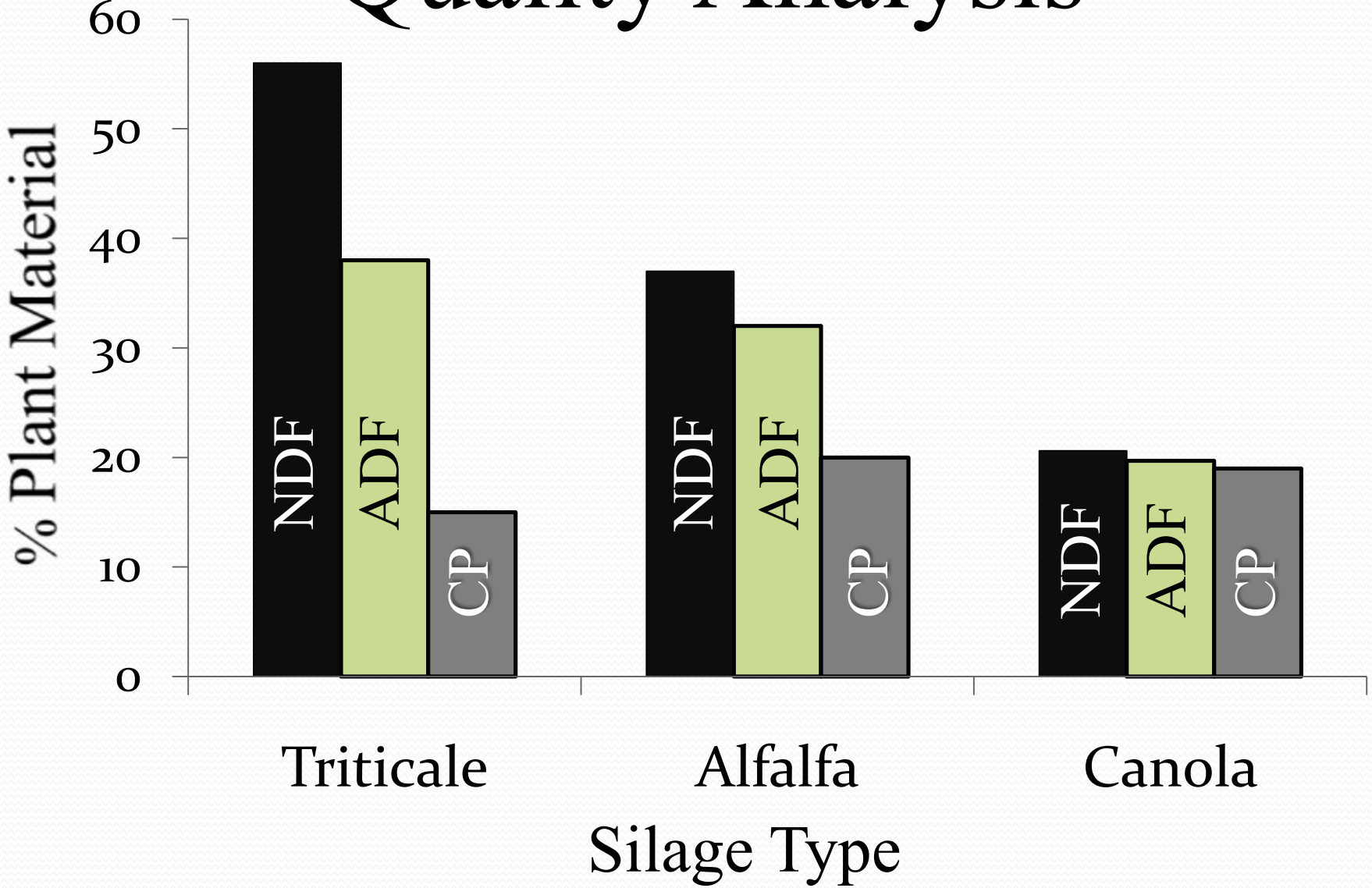
- Neutral Detergent Fiber (NDF) - Ash
- Acid Detergent Fiber (ADF) - Dry Matter
- Crude Protein (CP) - pH
- Crude Fat (CF)

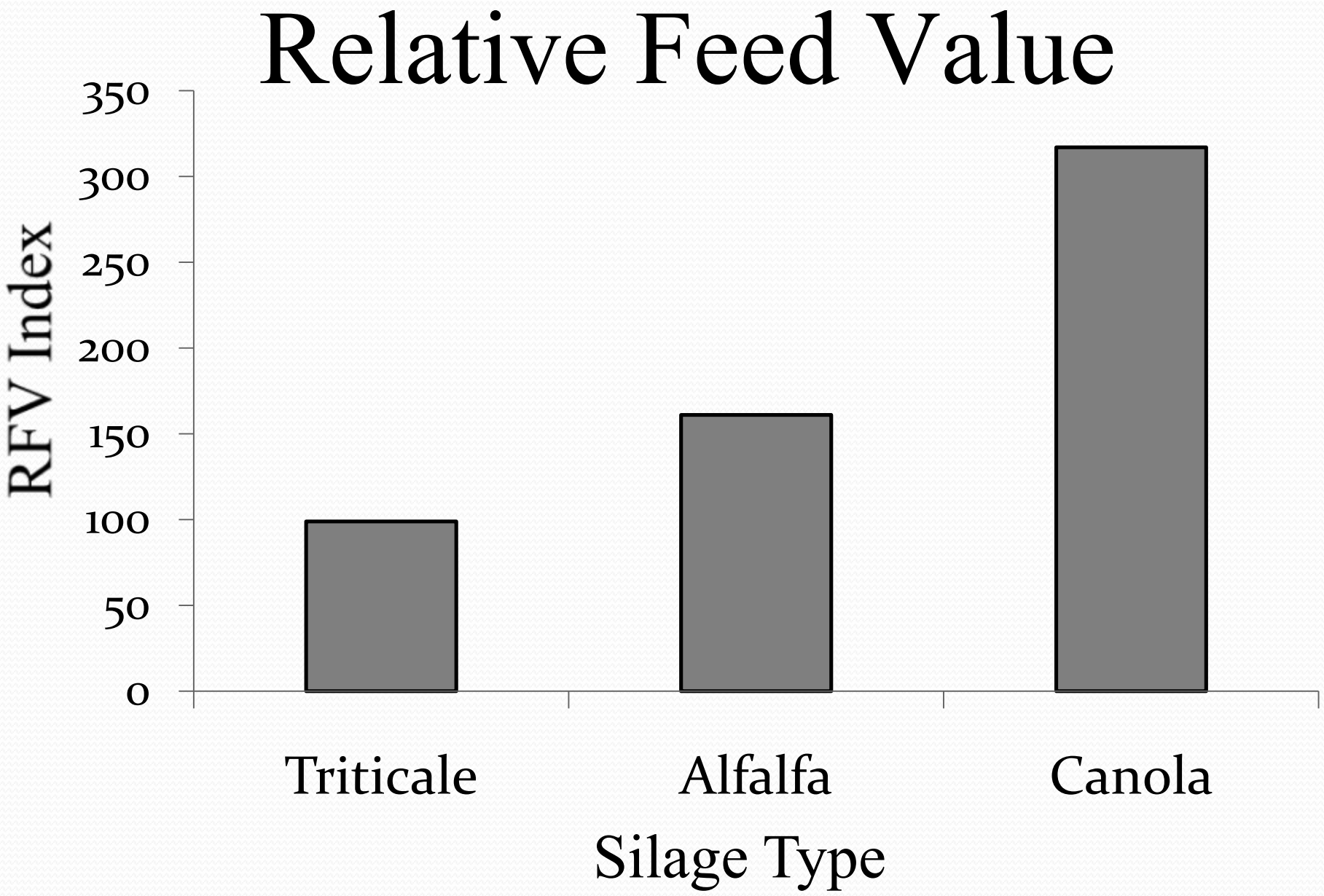
- Used standard wet chemistry.
- Use NIR for Crude protein.

Forage Harvest

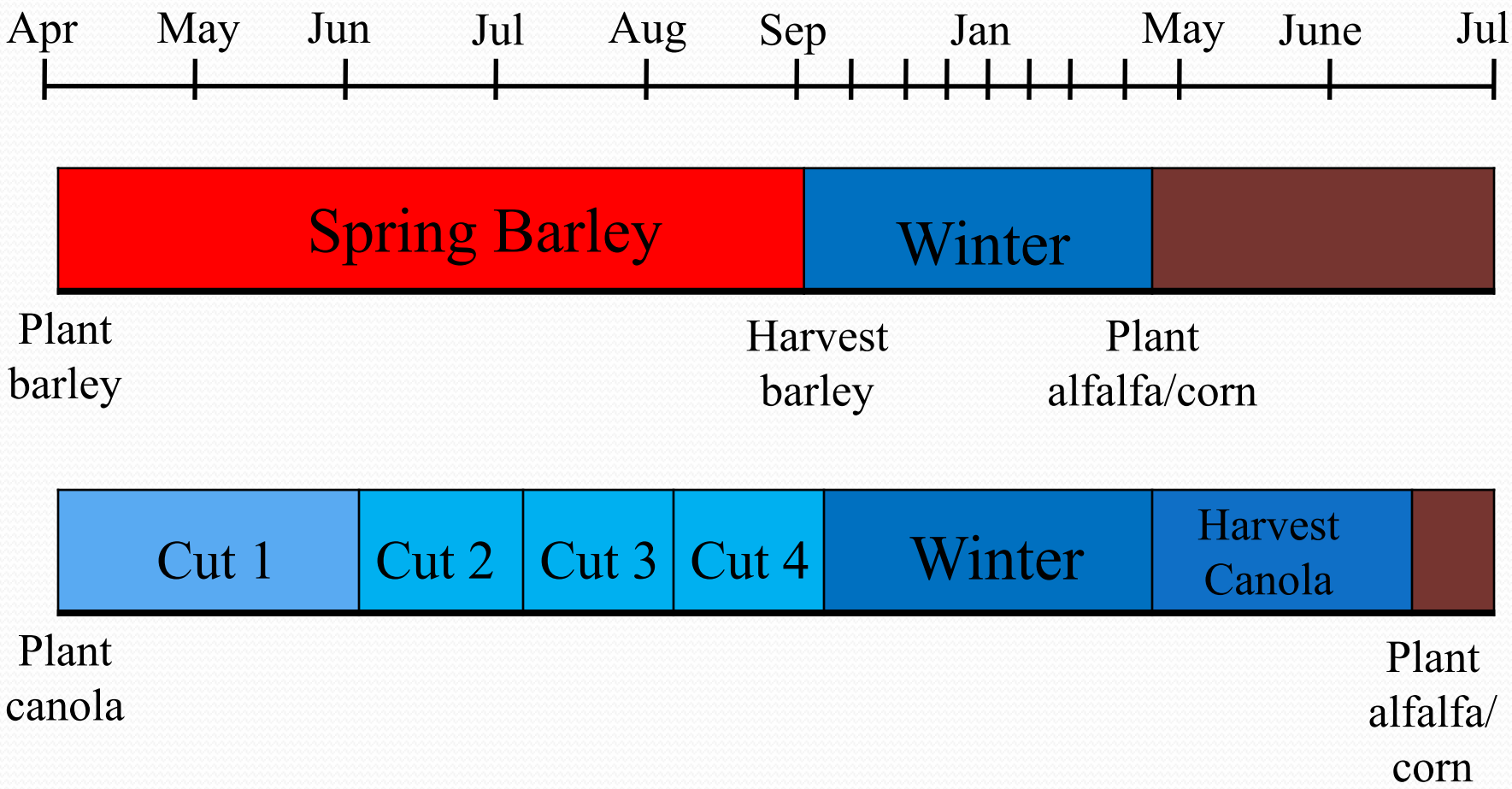


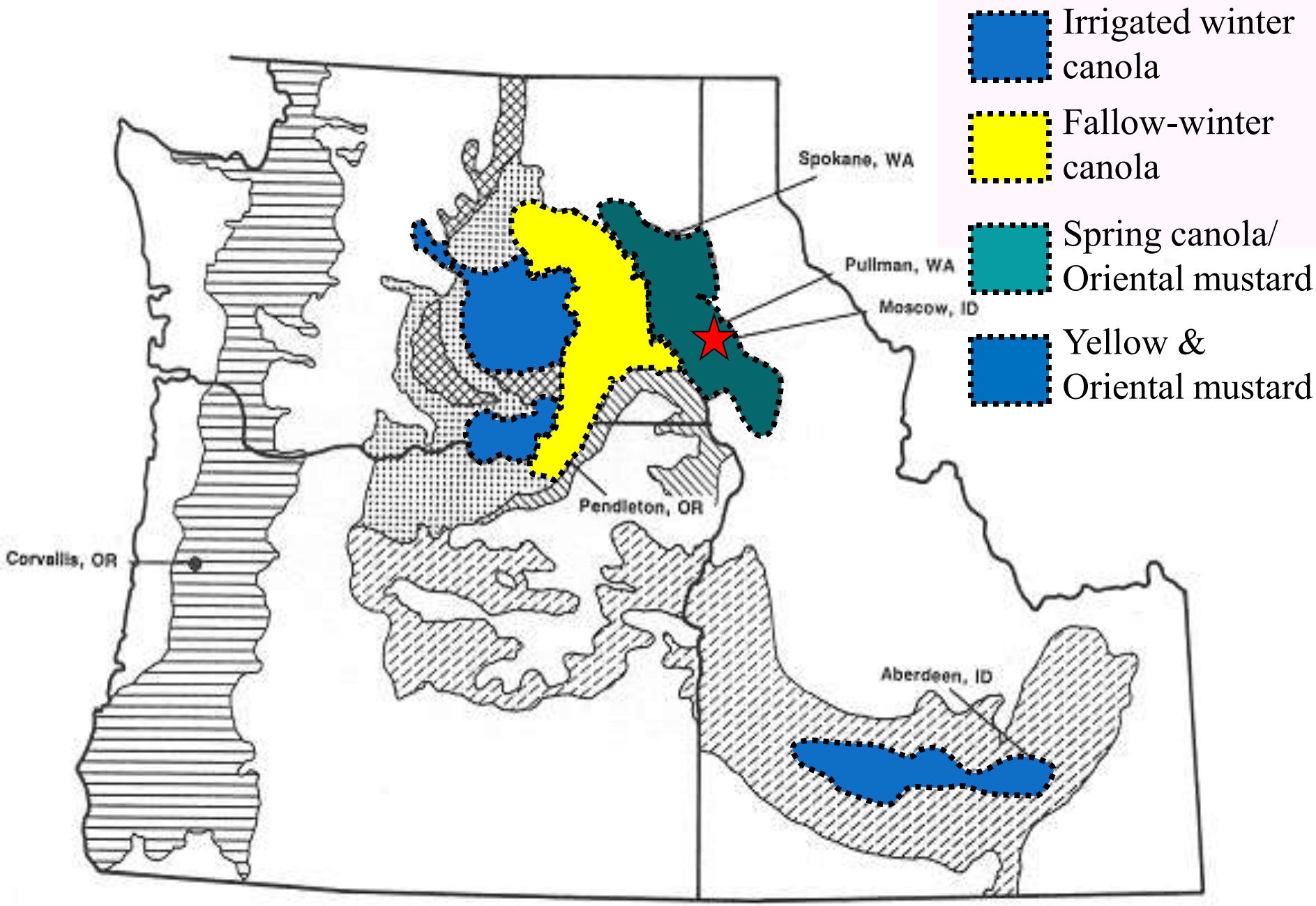
Quality Analysis




Relative Feed Value
RFV Index
350
300
250
200
150
100
50
0
Triticale
Alfalfa
Canola
Silage Type

Timeline


Apr
May
Jun
Jul
Aug
Sep
Jan
May
June
Jul
Spring Barley
Winter
Plant barley
Harvest barley
Plant alfalfa/corn
Cut 1
Cut 2
Cut 3
Cut 4
Winter
Harvest Canola
Plant canola
Plant alfalfa/ corn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Fallow-winter canola
Spring canola/ Oriental mustard
Yellow & Oriental mustard
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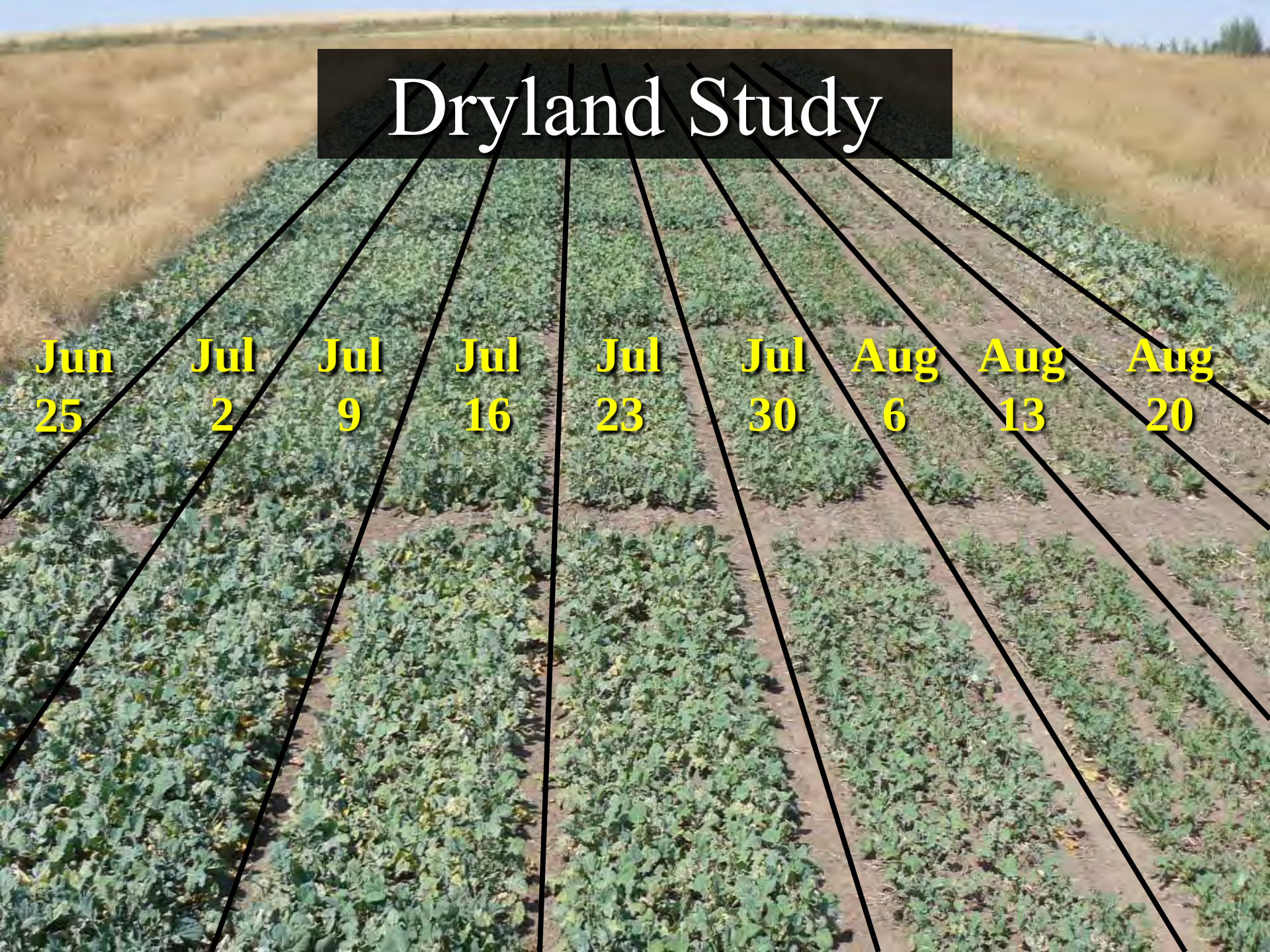
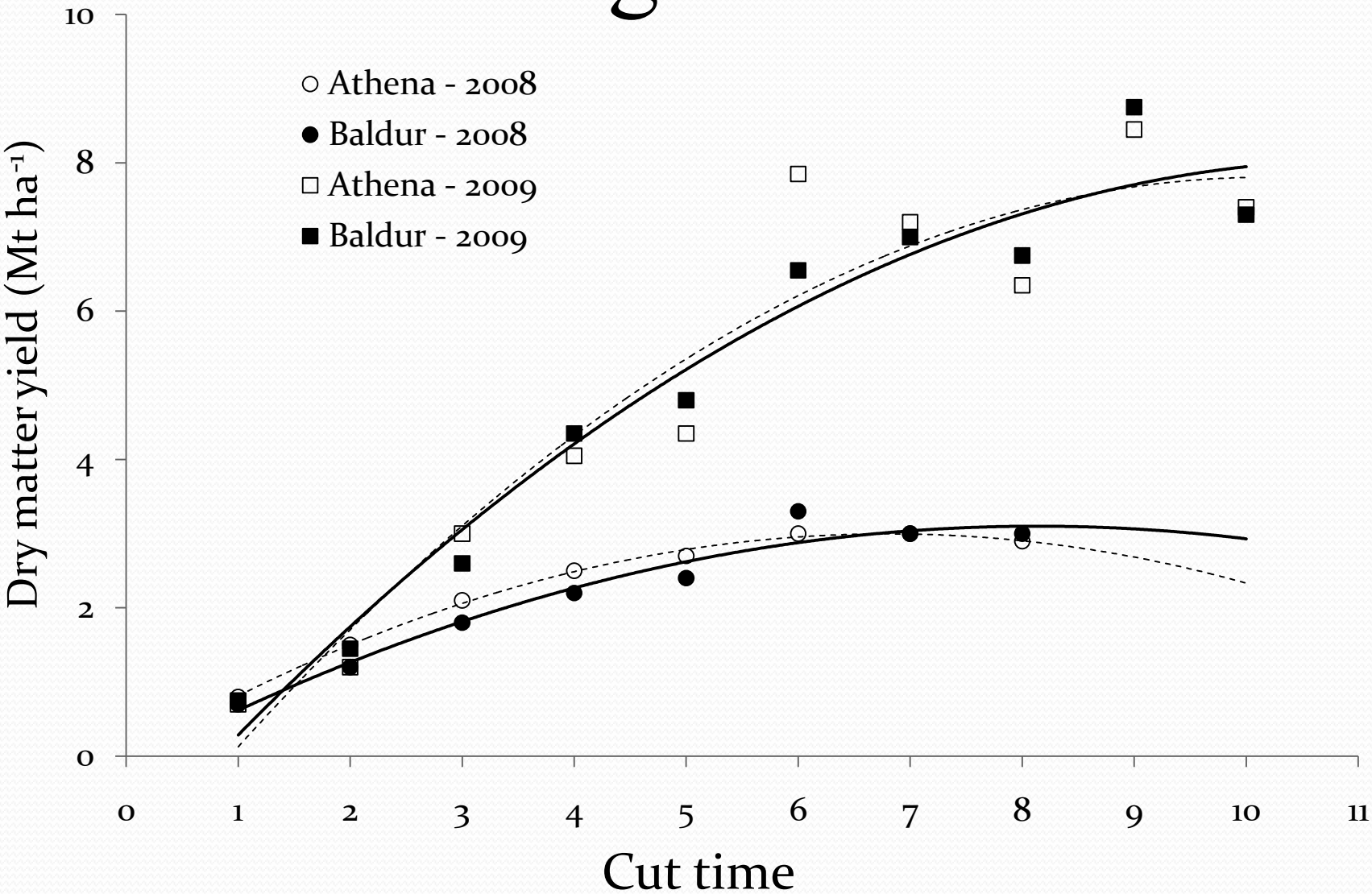
Dryland Study



Forage Yield



Dryland Biennial Canola

- Similar forage yield to dryland alfalfa.
- Intercropping with wheat/triticale.
- Reduce wind erosion in fallow year.
- Increase soil moisture.
- Increase crop dependability.
- Increase farmer income.

Feeding Practices

Silage

Strip Feeding

Concerns

- Nitrates.
- Sulfur.
  - Polioencephalomalacia (rape blindness).
  - Cu and Se deficiencies.
- Glucosinolates.
  - Goiter.
- Pulmonary Emphysema.
- Bloat.

Aphid Damage

Questions?