



Dual-Purpose Winter Canola: Forage, Silage, and Grain Production

Ely Walker, Don Llewellyn, and Steve Fransen

Canola Forage

– The Good

- High energy
- High protein
- Low fiber
- Provides a fall forage source



Canola Forage

– The Bad

- **Low fiber?**
- **High moisture**
- **Nitrates**
 - Inhibits O₂ transport
- **Sulfur**
 - Haemolytic Anaemia
 - Polioencephalomalacia
 - Inhibit trace mineral absorption (Cu and Se)



Dual-Purpose Study

- **Planted in mid-August in Prosser, WA**
- **Croplan 154W RR winter canola**
- **Brillion seeder**
- **8 lbs./ac to maximize forage yield**
- **Irrigated**

Dual-Purpose Study

- Plots received 1 of 8 fertilizer treatments
 - 1/3 of fertilizer was applied preplant
 - 2/3 was top dressed prior to bolting

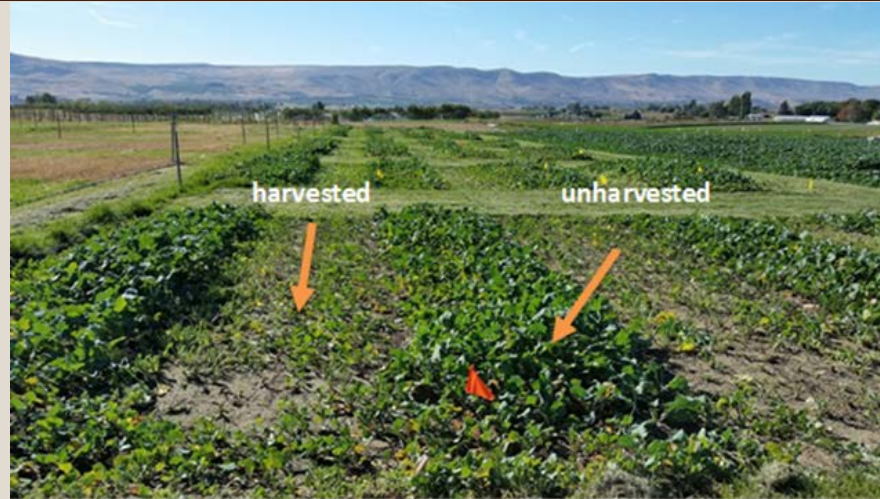
100N0S	100N20S	100N40S	100N20S+ Agrotain
200N0S	200N20S	200N40S	200N40S+ Agrotain

Dual-Purpose Study

- Forage was harvested in mid-October
 - 60 days after planting
 - Plots were split

	2014	2015
Yield (t DM/ac)	0.92	0.99
Dry Matter (%)	11	18

Dual-Purpose Study



Dual-Purpose Study

- Forage was combined per fertilizer treatment
- Ensiled with and without alfalfa cubes
- Agrotain treatments were not included



Dual-Purpose Study

– Forage quality

	Crude Protein	Crude Fat	Ash	NDF	DMD24	DMD48
2014	19	5	16	23	91	94
2015	13	4	17	24	84	88

Dual-Purpose Study

– Silage quality

	Crude Protein	Crude Fat	Ash	NDF	DMD24	DMD48
2014 w/ Alfalfa	18	4	13	35	72	77
2015 w/ Alfalfa	15	3	15	30	75	80
2014 w/o Alfalfa	15	7	14	22	83	92
2015 w/o Alfalfa	11	5	16	22	86	91

Dual-Purpose Study

	Silage With Cubes	Silage W/O Cubes
DM (%)	32	16
pH	4.6	4.3
Lactic (% DM)	6	12
Lactic (% VFA)	74	80
Acetic (% DM)	2	3
Butyric (% DM)	0	0
Effluent (gal./t)	2	37

Dual-Purpose Study

– Nitrates

- Very low levels
- Few environmental stressors

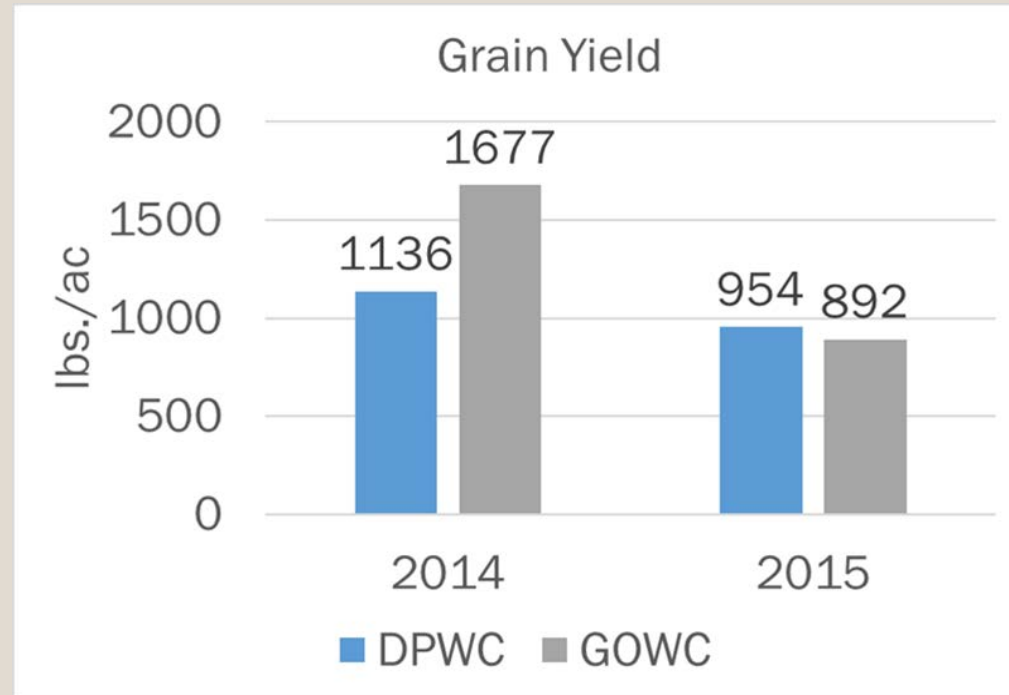
– Sulfur

- Potentially toxic levels
- Ranging from .3-.6
- Ensiling and Alfalfa cubes reduced S levels

Dual-Purpose Study

– Grain

- Low overall grain yields
- Shatter
- Harvest Losses
- Birds



Thank You!

