A photograph showing several white broiler chickens crowded together in a metal wire cage. The chickens are packed closely, with some showing signs of stress or injury, such as red, irritated skin on their heads and necks. The cage is made of metal bars, and the floor is covered with a layer of brown, granular material, likely bedding or litter. The lighting is somewhat dim, and the overall scene suggests a high-density, industrial farming environment.



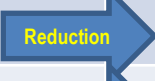
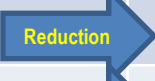
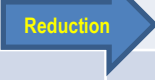
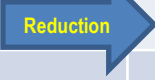
**Broiler AME Comparison of
B. napus, *B. juncea*, and
Air-Classified Fractions**

**Matt Oryschak and
Eduardo Beltranena[©]**

Background

- Feed Industry Guide states 2000 kcal AMEn
- CCC goal was to increase AMEn 10% by 2015
- We have previously compared the SID of *B. napus* and *B. juncea*, but ATTD GE data was not meaningful
- Air-classification has potential as plant tail-end processing step to value-add SE canola meal

Air-Classified Fractions (90% DM)

	<i>B. napus</i>			<i>B. juncea</i>		
%	Parent	Light	Heavy	Parent	Light	Heavy
CP	39.5	40.9	36.6	38.9	40.0	36.6
EE	2.2	4.0	2.0	1.8	3.1	1.7
CF	9.8 	0.3	8.6	6.9 	0.4	8.2
ADF	20.2 	12.8	25.1	13.0 	8.4	16.3
NDF	27.4 	20.1	30.9	20.6 	13.3	23.1
Av. Lys	1.8	2.2	1.9	1.9	1.9	1.6
Met	0.7	0.8	0.7	0.7	0.8	0.6
Thr	1.4	1.7	1.5	1.6	1.6	1.4
Try	0.5	0.5	0.5	0.4	0.5	0.4
Glucosinolates, μmol/g	6.4	4.6	3.8	11.8	9.6	8.8

Objectives

- Compare ATTD, AME values at 14 and 28d
- Determine if AME differences reflect on growth performance, dressing %, carcass components



Starter Test Diets

		<i>B. napus</i>			<i>B. juncea</i>		
	Control	Parent	Light fraction	Heavy fraction	Parent	Light fraction	Heavy fraction
CONTROL DIET		70.00	70.00	70.00	70.00	70.00	70.00
B. napus meal		30.00					
B. napus AC light fraction			30.00				
B. napus AC heavy fraction				30.00			
B. juncea meal					30.00		
B. juncea AC light fraction						30.00	
B. juncea AC heavy fraction							30.00
Corn grain	57.97						
Cornstarch	14.29						
Egg white, dry	13.80						
Solka floc	4.29						
Sunflower oil (high oleic)	3.31						
Mono-di-calcium phosphate	2.41						
Limestone	1.79						
Vitamin/mineral premix	0.71						
Magnesium oxide	0.61						
Salt	0.34						
Lysine-HCl	0.29						
L-Arginine	0.14						
D,L-Methionine	0.03						
Sodium bicarbonate	0.03						

- Diets limiting in energy, but not in other nutrients
- Amino acids 115% on g dAA/Mcal
- Assumed AME for feedstuffs was 2000 kcal/kg

Grower Test Diets

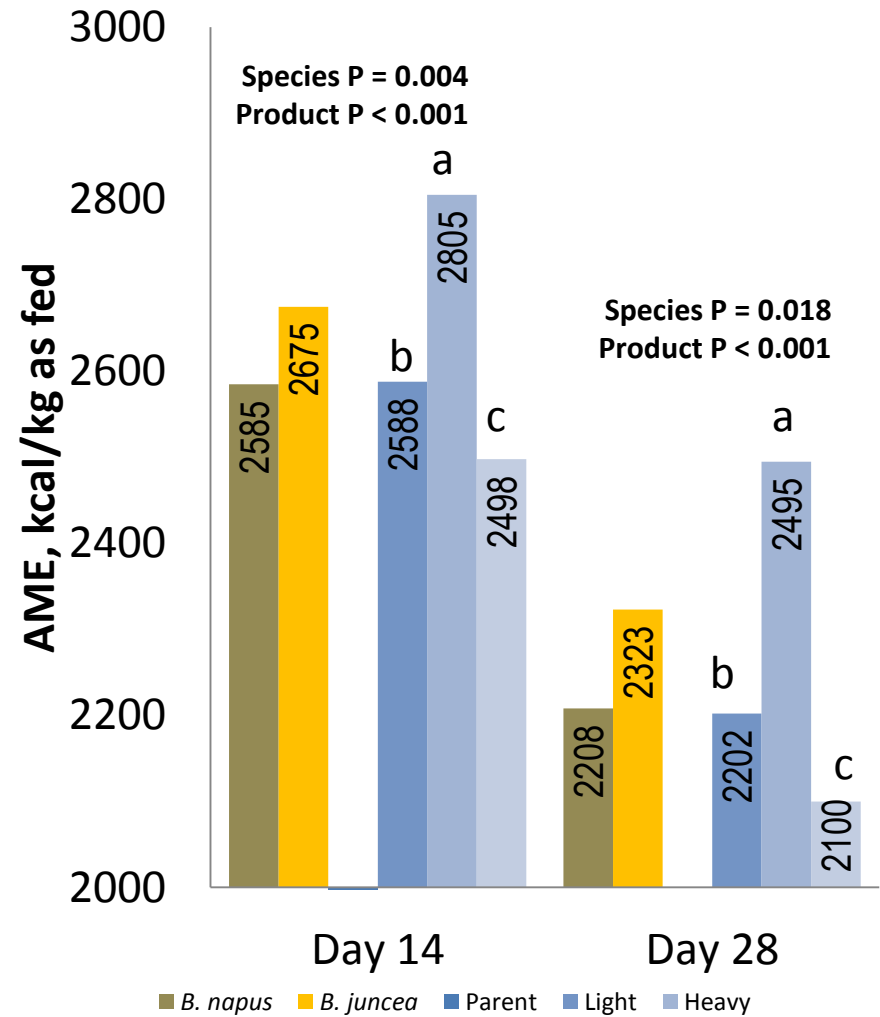
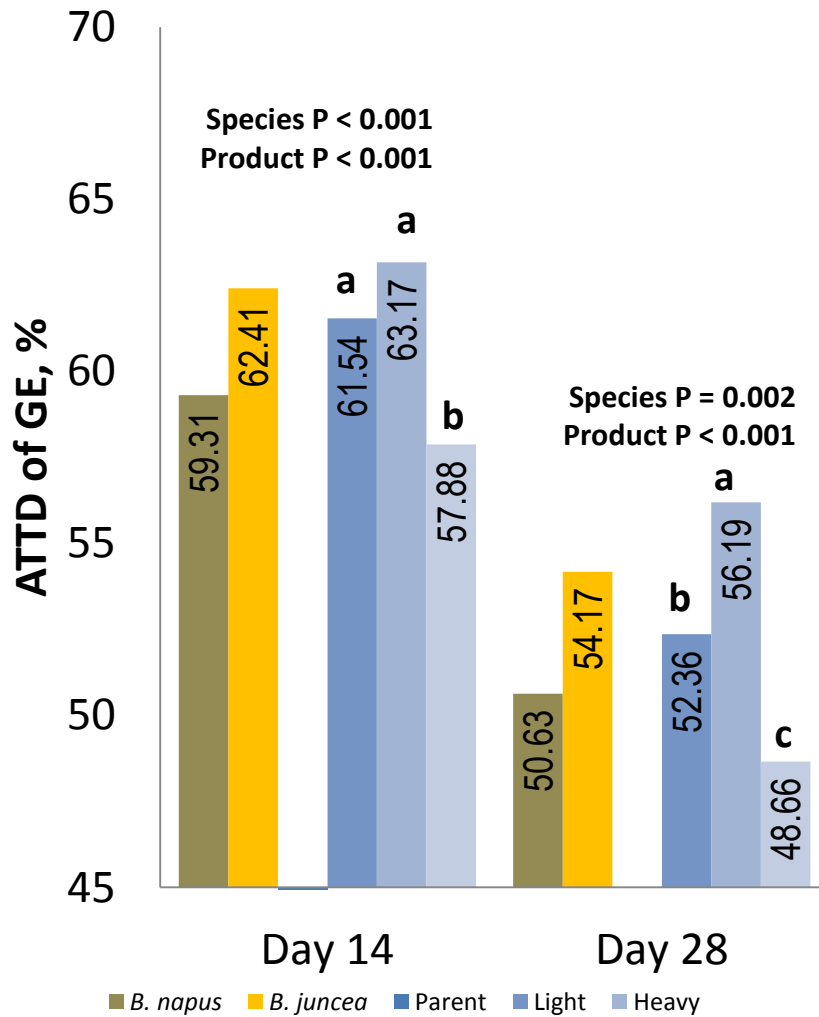
		<i>B. napus</i>	<i>B. napus</i>	<i>B. napus</i>	<i>B. juncea</i>	<i>B. juncea</i>	<i>B. juncea</i>
	Control	Parent	Light fraction	Heavy fraction	Parent	Light fraction	Heavy fraction
CONTROL DIET		70.00	70.00	70.00	70.00	70.00	70.00
B. napus meal		30.00					
B. napus AC light fraction			30.00				
B. napus AC heavy fraction				30.00			
B. juncea meal					30.00		
B. juncea AC light fraction						30.00	
B. juncea AC heavy fraction							30.00
Corn grain	73.66						
Egg white, dry	12.66						
Cornstarch	7.14						
Mono-di-calcium phosphate	2.01						
Limestone	1.54						
Sunflower oil (high oleic)	1.43						
Vitamin/mineral premix	0.71						
Salt	0.33						
Lysine-HCl	0.33						
L-Arginine	0.14						
D,L-Methionine	0.04						

- Diets limiting in energy, but not in other nutrients

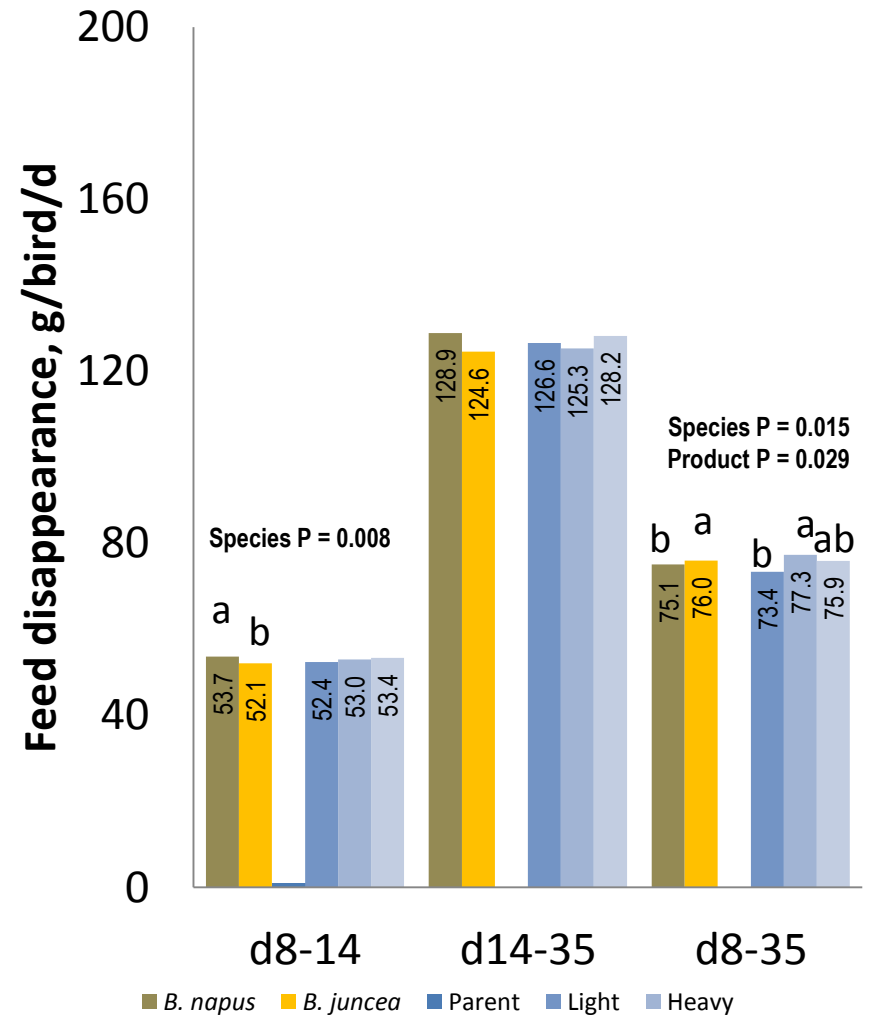
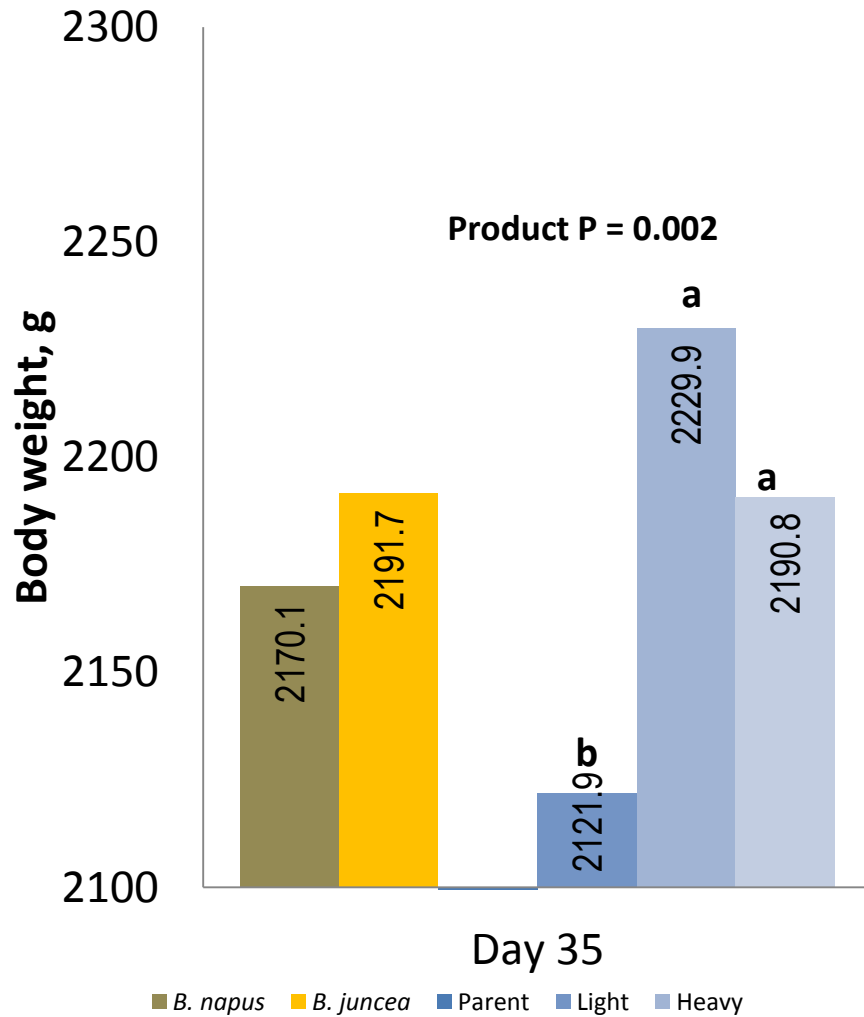
- Amino acids 115% on g dAA/Mcal

- Assumed AME for feedstuffs was 2000 kcal/kg

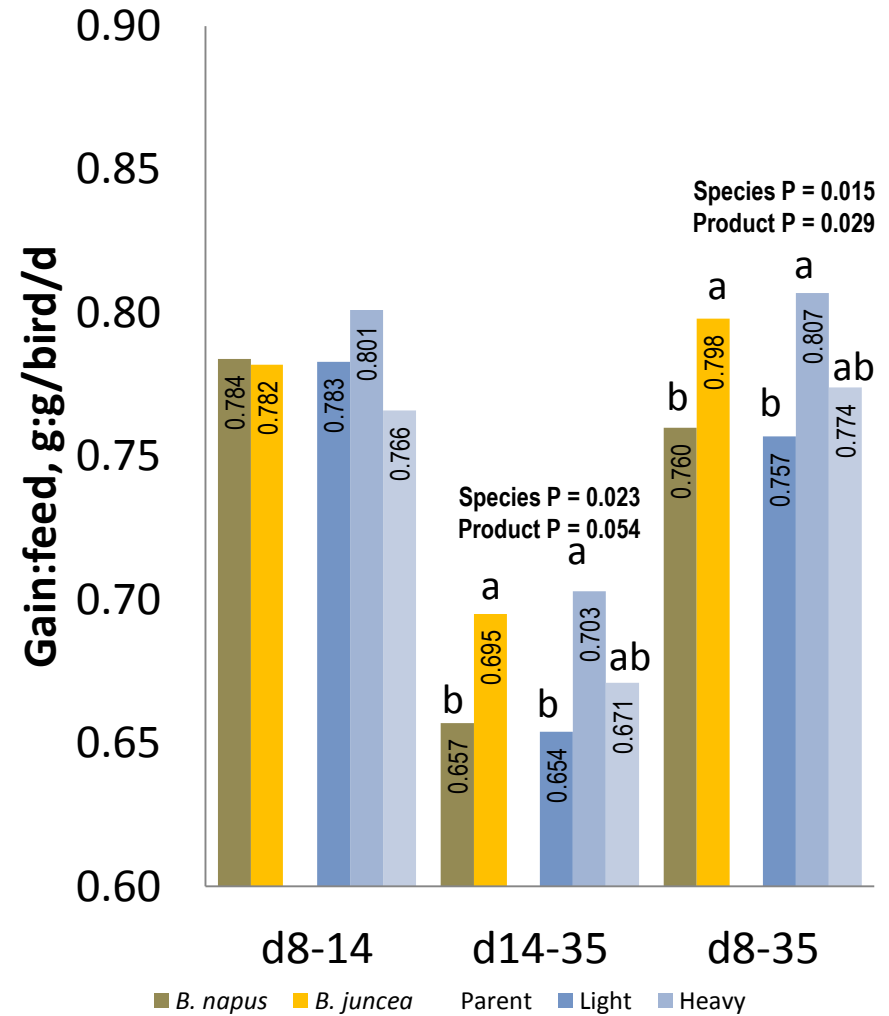
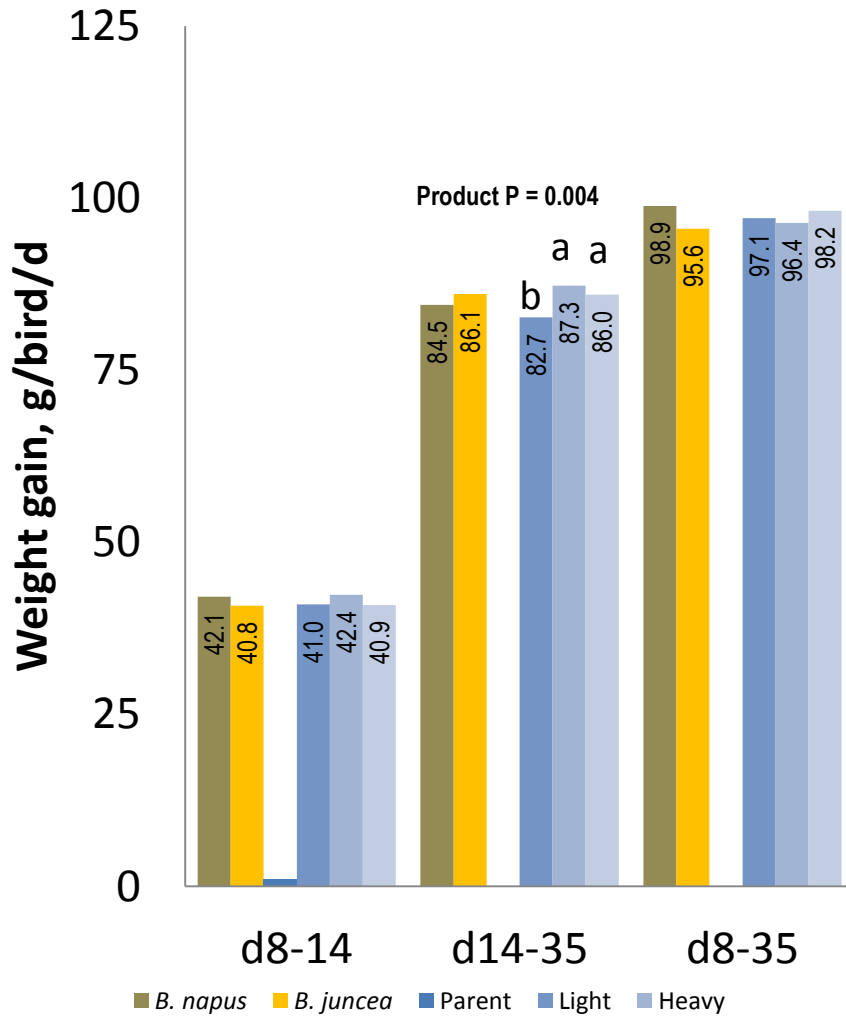
B. napus, *B. juncea*, and Fractions



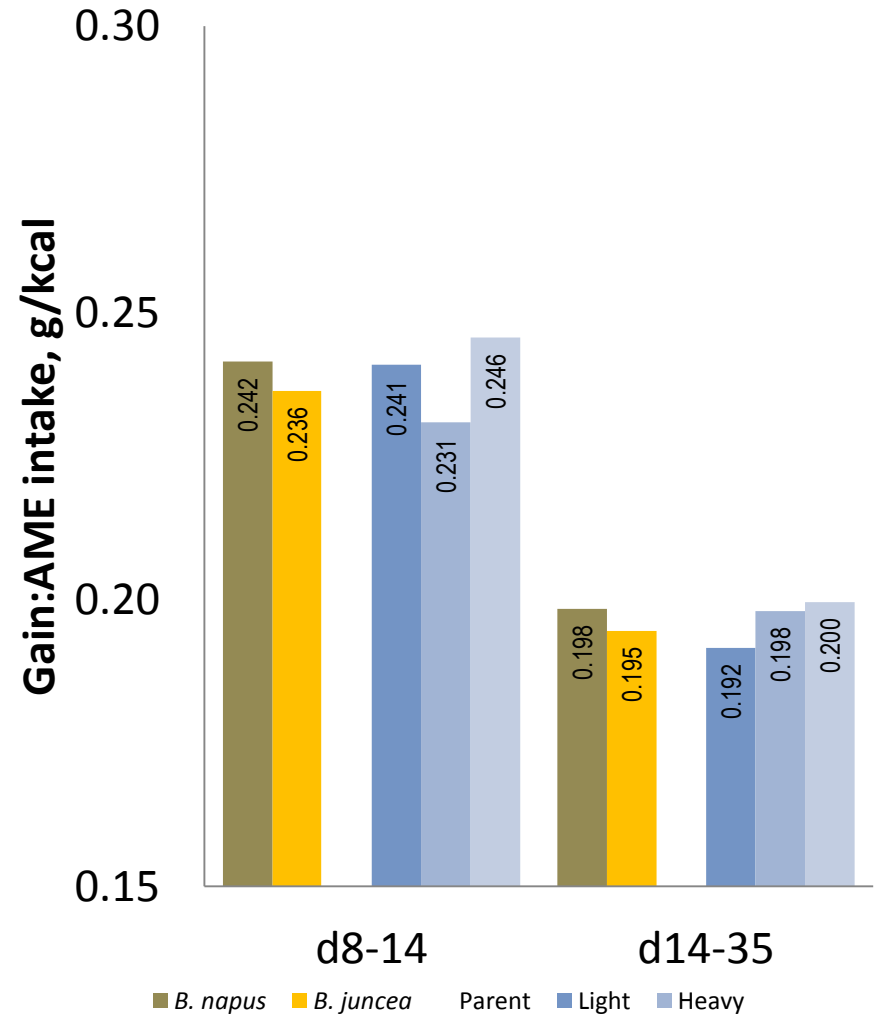
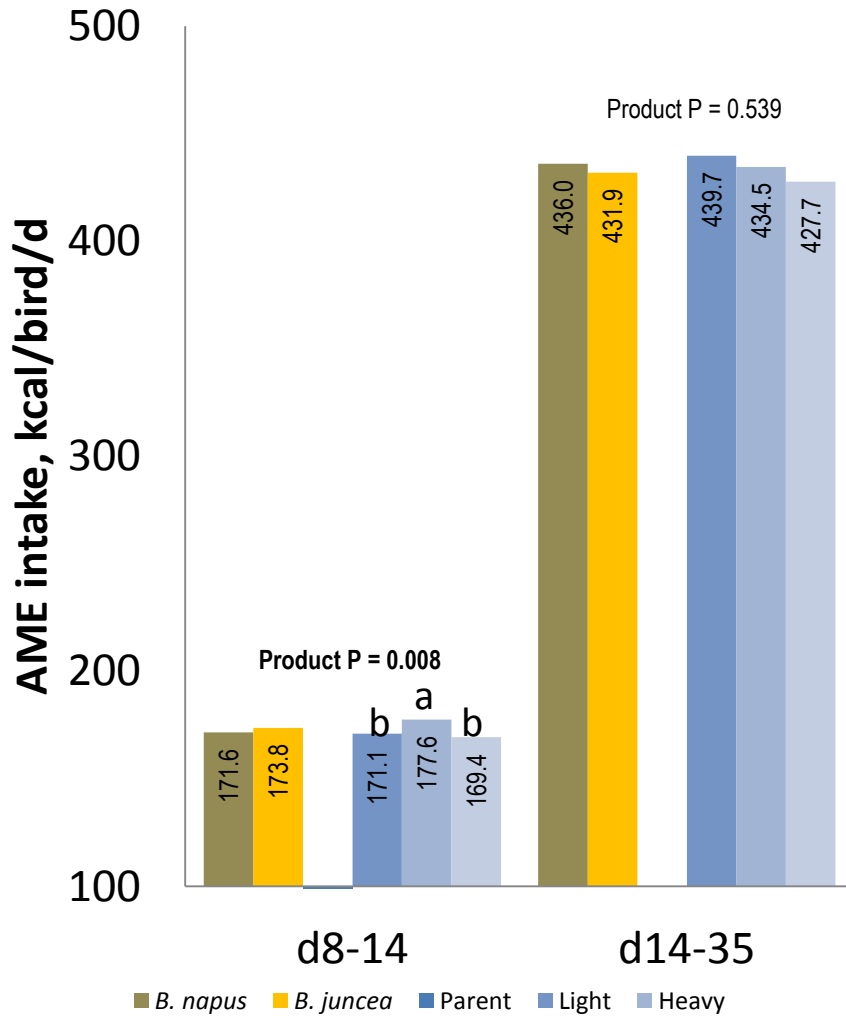
B. napus, *B. juncea*, and Fractions



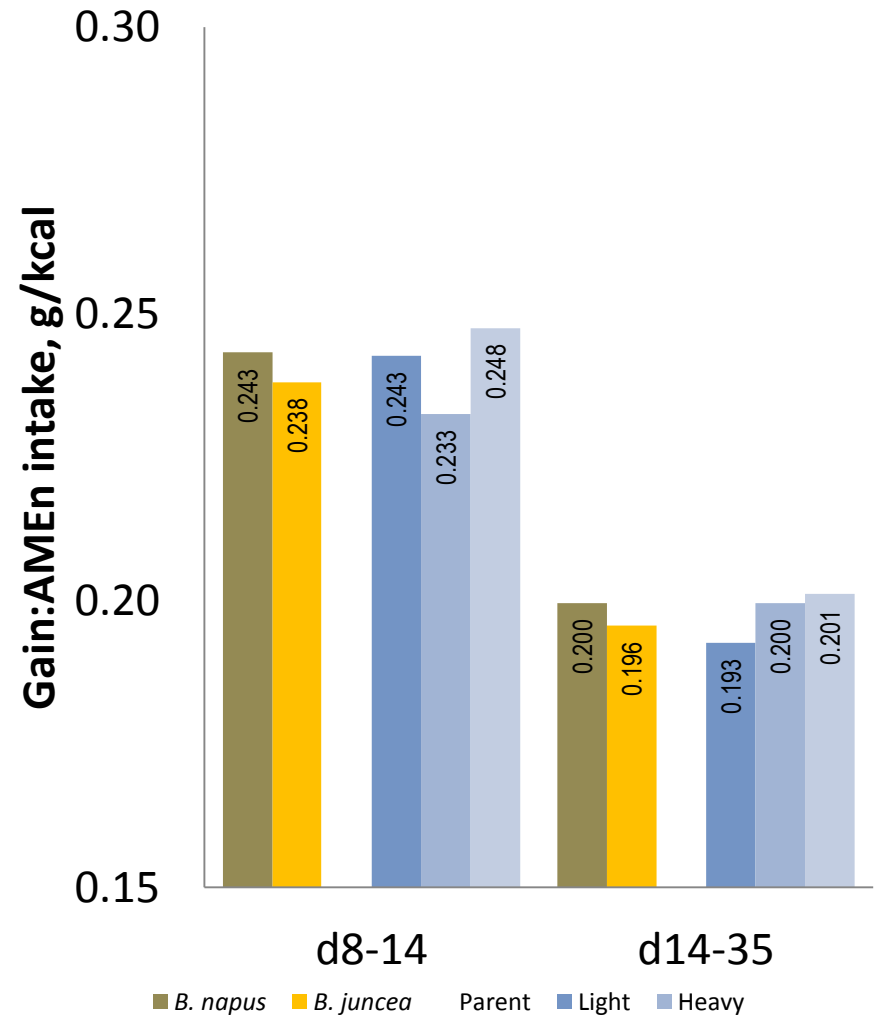
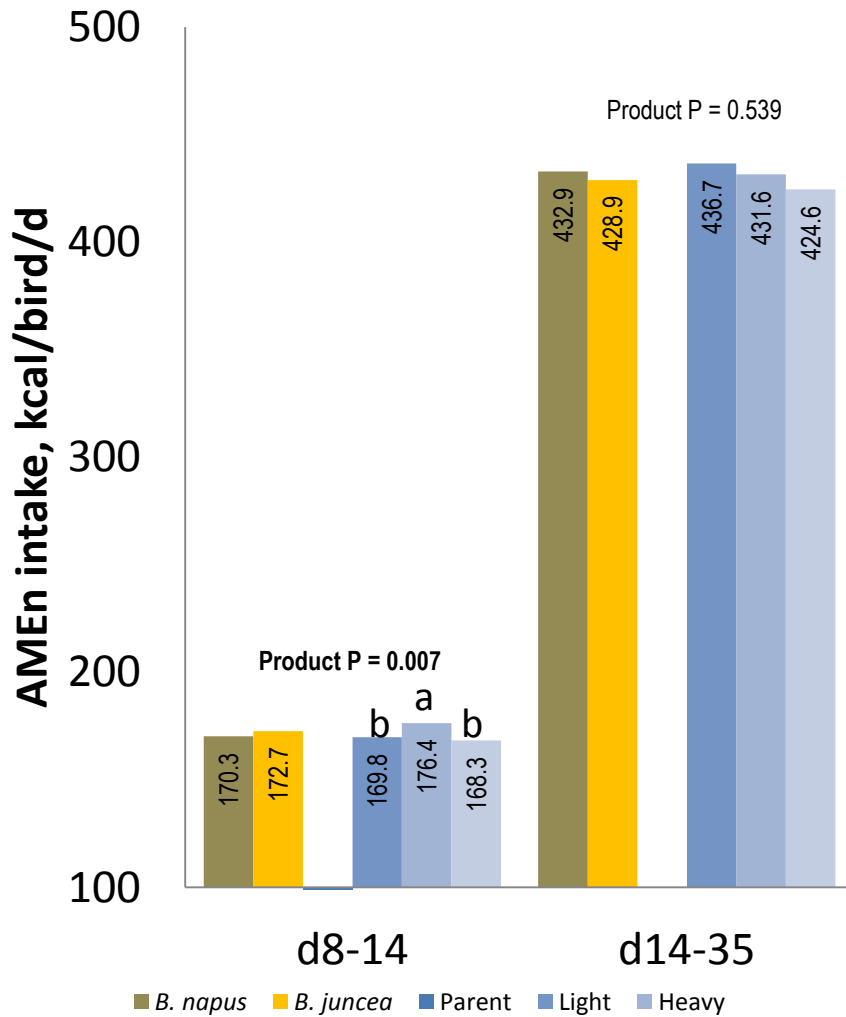
B. napus, *B. juncea*, and Fractions



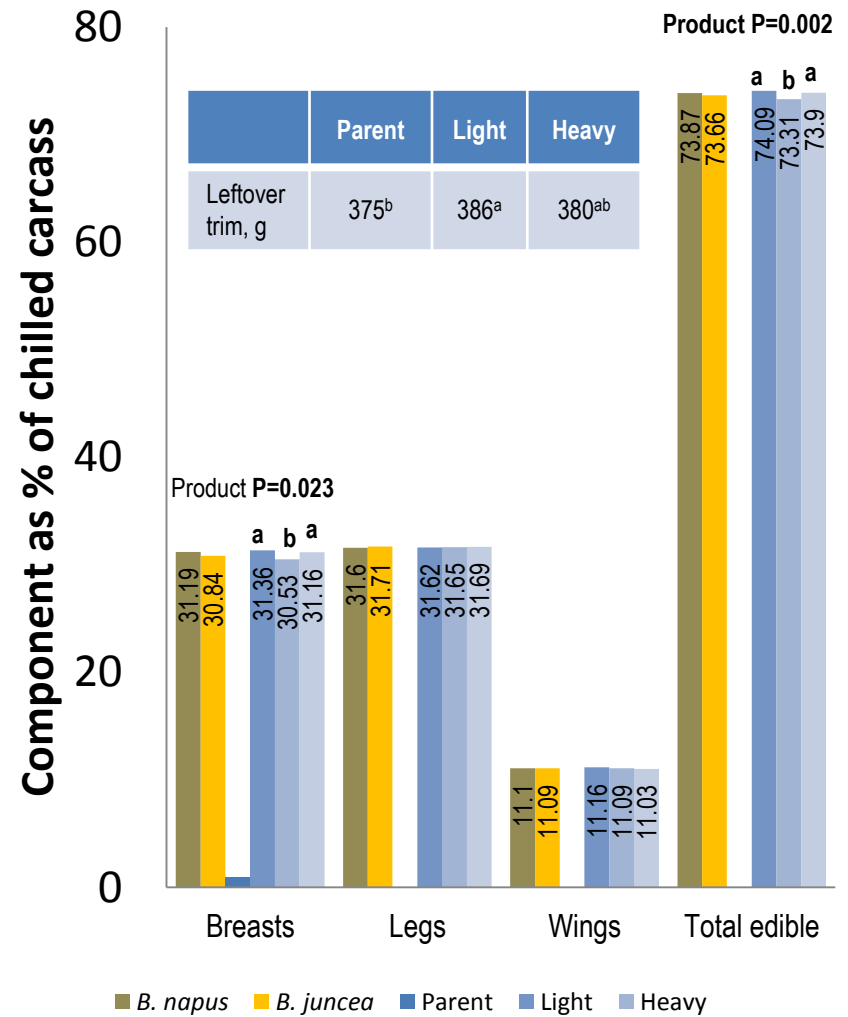
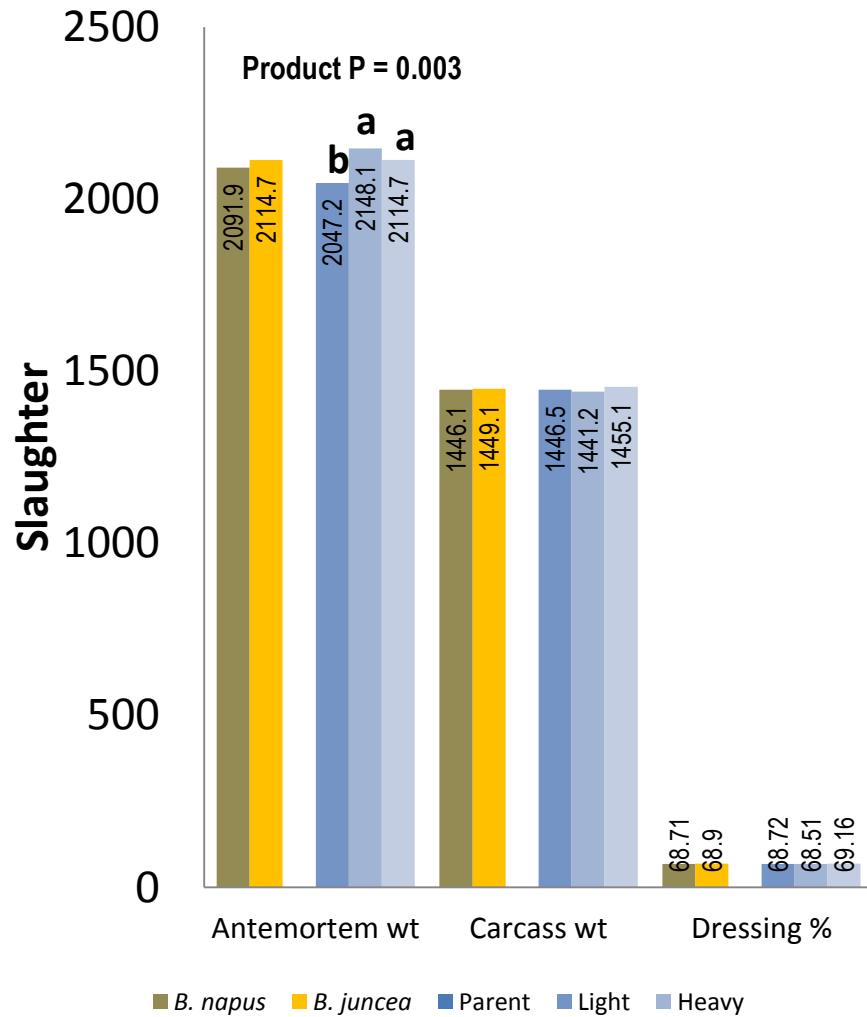
B. napus, *B. juncea*, and Fractions



B. napus, *B. juncea*, and Fractions



B. napus, *B. juncea*, and Fractions



Conclusions

- ATTD of GE, AME d14, d28 no different *B. napus* vs. *B. juncea*
- **AME** determined SE CM at d14 was **2600**; at d28 was **2200**
- 200kcal AME diff Light vs. Parent; 100kcal diff Parent vs. Heavy
- Feeding fractions 100g heavier birds on d35, or 4% improv.
- Overall ADFI 1g/d juncea vs. napus; 4g fractions vs. parent
- Overall ADG, no diff juncea vs. napus; fractions vs. parent
- Overall G:F, 5%↑ juncea vs. napus; 7% Light vs. parent
- No differences in AME or AMEn intake or caloric efficiency
- 1g heavier breast (*P. minor*) and 1g more total edible meat for parent and heavier fractions vs. light fractions, and more trim for light fractions suggest not enough dig AA for extra AME in light fractions